

GEN

ALLEN COUNTY PUBLIC LIBRARY



3 1833 01841 8779

GC

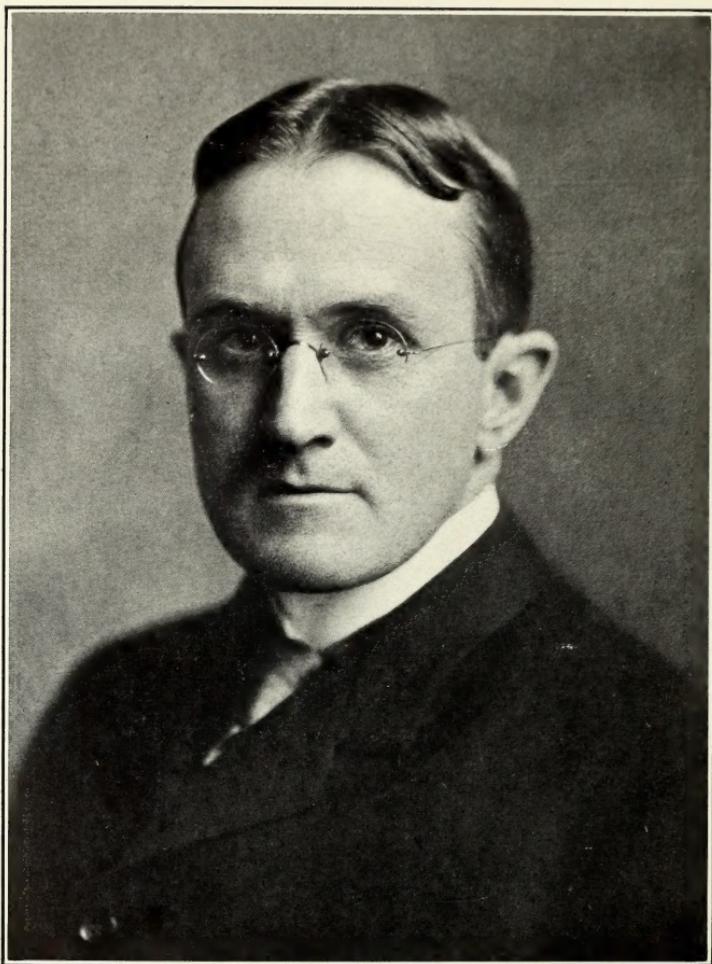
974.402

F555AR,

1911



Digitized by the Internet Archive
in 2014



HON. FRANK O. HARDY
Mayor of Fitchburg

CITY DOCUMENT No. 39

ADDRESS OF THE MAYOR

JANUARY 1, 1912

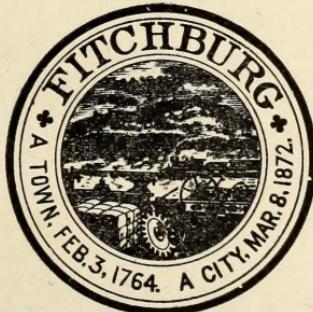
TOGETHER WITH THE

ANNUAL REPORTS

OF THE

CITY OF FITCHBURG

FOR THE YEAR 1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912

CITY OF FITCHBURG.

IN CITY COUNCIL, January 1, 1912.

Ordered: That the committee on printing be and they hereby are authorized to advertise for bids and cause to be printed eight hundred (800) copies of the annual reports of the different departments of the city for the year 1911, together with the Inaugural Address of Hon. Frank O. Hardy for the year 1912.

The expense of the same to be charged to "Printing Account."

A true copy.

Attest:

WALTER A. DAVIS.

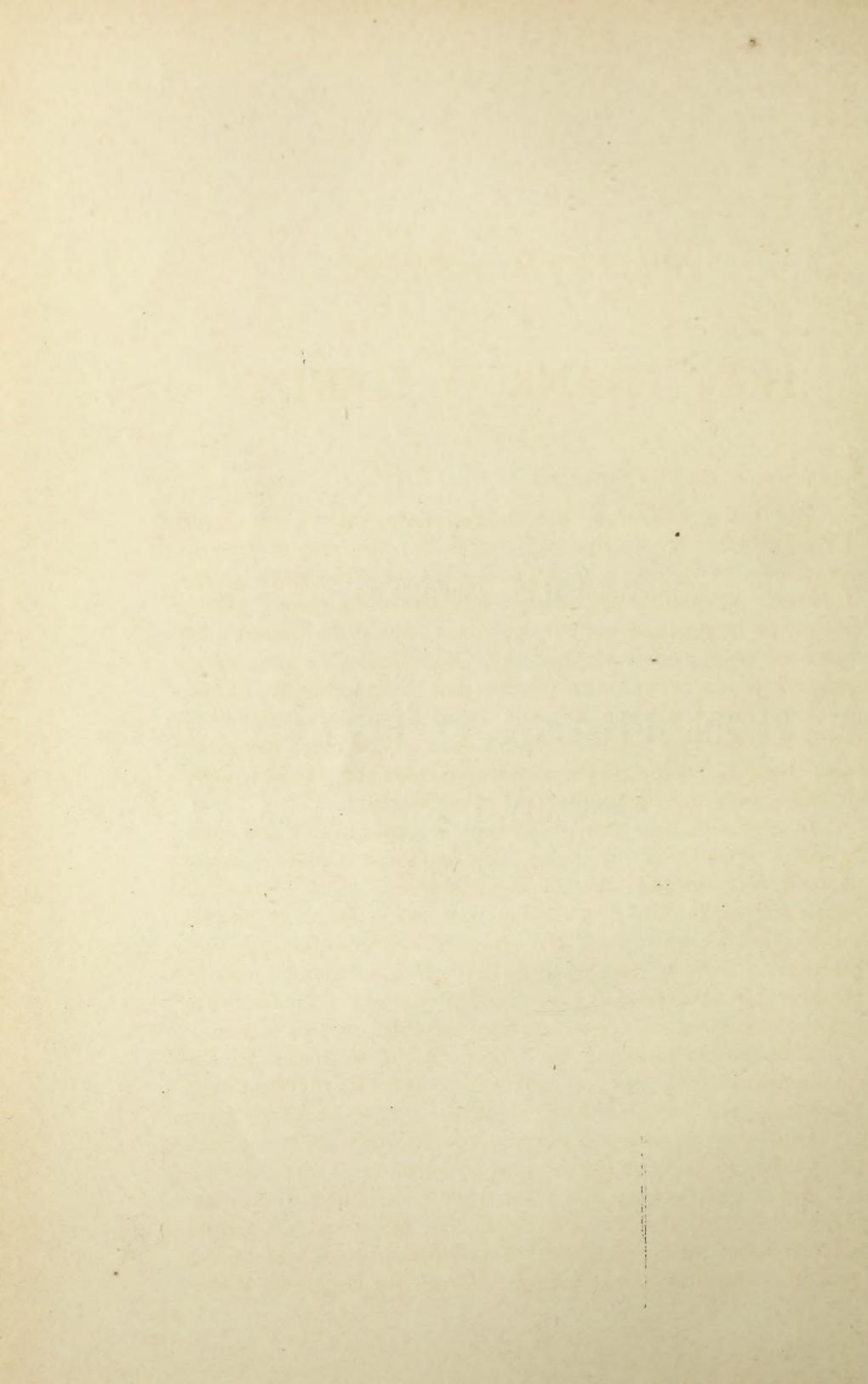
City Clerk.

INAUGURAL ADDRESS

OF

HON. FRANK O. HARDY

JANUARY 1, 1912



INAUGURAL ADDRESS OF HON. FRANK O. HARDY

Gentlemen of the City Council:

For the fortieth time since the Legislature first granted our city its charter, representatives chosen by the people meet to organize. As year after year goes by the force of custom grows stronger. I feel that the custom established by twenty predecessors in thirty-nine annual messages should be honored by again observing it. As we stand here today in the places honored by so many men of the past, our thoughts differ, probably, not much in the main, from theirs. For some the future is a new and untried field, for others experience has given some insight, but for all the sobering thought of official responsibility supersedes the excitement of the election.

In assuming any new position or in undertaking the management of any new enterprise, we look about to take account of stock, so to speak. We interest ourselves first to know what assets and what liabilities confront us, what rights or powers there are, and how these are mingled with duties and prohibitions. This is no less true as we now assume official position as members of the city government. Thus it has seemed best for me to speak briefly along this line this morning.

First of all, then, we have been chosen to direct, for the ensuing municipal year, the business of the city of Fitchburg. Fitchburg is a fine New England city. It has naturally good air, good water, and good views. Its physical assets are such that, either from the point of view of health or of convenience, it is a city to be reckoned with, for it has possibilities of development along both lines. The North, the West and the South, may all have their claims, but this is home to us, and he is a rare man indeed who can afford to decry the claims of home.

We are, and always have been, free from scourging plagues of disease; the very contour of the country aids in this result. The death rate is low, and we are not for years, if ever, likely to be troubled by the fearful problems of congestion of population.

Our transportation facilities, which are unusually good, will continue to prove of valuable assistance in making us the center of a large and desirable population.

Our history, too, is inspiring. One hundred and forty-eight years ago, on the third of February, we were set off from our neighbor Lunenburg, and the child has surely grown! At various times we have taken from or given to Lunenburg, Ashby and Westminster, parts of our territory, but the wisdom of the early settlers and the pioneers has been demonstrated. Our civic record has been clean and bright, and our sons have wrought wisely and well, both without and within our borders.

Figures of population do not, however, tell the whole story of growth. For happiness a man requires at least a comfortable house, enough to eat, adequate pay for his work, and in addition as many of the other comforts of life as possible. And I believe that a community whose people are not well-housed, well-fed, well-paid and well-comforted is neither a normal, a healthy nor a happy community. Hence, if the town grow in population only, and not in these other ways, it is not a growth to be desired, and mere figures connot indicate its condition.

I believe, however, that we have made some progress in all these lines, and hence that our growth is to a considerable extent healthy and normal.

My conclusion is not based upon generality alone, for while we have grown from a town of about 10,000 people in 1872 to one of nearly 40,000 in 1912, there are other evidences of an all-around growth. I regret that the figures for the last Federal census are not available, but indication of tendencies as found in the ten-years period, 1895 to 1905, are interesting. These show that from 1875 to 1905 our population increased 168 per cent. In the value of goods we increased 68 per cent. An interesting comparison tending to prove my belief that we gain in the comforts of life is shown by the fact that in the same period there was an increase of 20 per cent. in the number of persons employed, while the increase in wages paid was 37 per

cent. It has often been said that our city is becoming an industrial and manufacturing center. You may be surprised, as I was, however, to know that while we stood in 1895 the twentieth city in the State in population, and one hundred and nineteenth in value of agricultural products, in 1905 we stood eighteenth according to population, and forty-third in value of agricultural products; that is, while we moved up two places in rank in number of people, we moved up seventy-six places in value of agricultural products. This to me means that our growth has elements of strength, and that what has so well developed in the past can be more developed in the future. In this connection I desire to lay particular stress on the fact that land in the City of Fitchburg and immediate surrounding country is capable of producing the best of crops, that through the medium of the automobile much of this land heretofore considered undesirable by reason of location, is now comparatively near at hand. It can without doubt be made to earn satisfactory return on capital invested. To all those interested in farming in its various branches, the State gives, free of expense, the most valuable assistance. I hope many will avail themselves of the opportunities to study into this question, for I am firmly convinced that farming is an occupation which is healthful, enjoyable, and one which can be made profitable. I am further prompted to ask your consideration of this question, because I believe that it is not for the best interests of Fitchburg that it should become exclusively a manufacturing city.

The financial statement of the city is as follows:

Total funded debt November 30, 1911,	\$1,553,577 50
<i>Less :</i>	
Water debt,	\$484,000 00
School loan,	250,000 00
	—————
	\$734,000 00
	—————
	\$819,577 50
<i>Less sinking funds :</i>	
General loan,	\$185,472 05
Sewer loan,	34,183 59
State Normal School,	19,908 06
	—————
	\$239,563 70
	—————
Net debt in calculating debt limit,	\$580,013 80

Valuation:

1909	\$28,534,435 90
1910	30,223,357 00
1911	32,078,117 00
Average for three years,	\$30,278,636 63
2½ per cent. of average valuation,	\$756,965 92
Borrowing capacity at present time,	175,881 48
To be paid from sinking fund,	35,000 00
Bonds maturing in 1911, to be paid by appropriation,	98,439 50
Sinking fund requirements,	25,300 00

Now to administer these assets is our duty. Our council is the legislative branch of the government. In the words of our charter, "the administration of all the fiscal, prudential and municipal affairs of the city with the government thereof" are vested in us. We are, in other words, the political branch of the government—that is, the "policy-forming" branch whose duty it is to determine, formulate and legislate on the policy of the city in its various affairs, leaving mostly to the several officers and boards the work of carrying those policies into effect.

We have not, however, an absolutely free hand, and so I wish to speak briefly of some of the prohibitions or controls laid upon us by law or otherwise within which we must act. These it is not inappropriate to regard as liabilities for the sake of carrying out our figure of speech.

First, then, our relation to the whole people fixes our responsibility. You will agree that it is more difficult to legislate for a large number of people than for a small number. The very dignity of our position ought to ensure freedom from partiality, either to persons or to localities. In the field of "big business," as it has been called, or the economic field of our national life, we have seen during the last fifteen years a growing war upon what has come to be regarded the special privilege—this conflict is one of the growing pains of the democracy—but as surely as this is true it is just as true that we should war upon the special privilege of persons or localities in the field of our political life.

The temptation for the weak man to play politics is greatest in the field of our relations to the people of the community, because the law does not often prescribe or lay down a rule for our conduct. When it does attempt to do so it most often imposes upon us merely the question of determining what the public convenience and necessity require, as in the matter of laying out a highway or abolishing a grade crossing, but the public convenience and necessity cannot be determined by rule. It is a matter of common sense and good judgment, of which we are made the judges. We represent the people of the community and in us is vested the right temporarily to make these decrees, but the very indefiniteness of the responsibility makes it one to be all the more carefully exercised.

But in our relation to the State the prohibitions and controls are more precise. In Massachusetts we have been growing away from the purest forms of self-government. The State has by its charter limited our authority. By law we can or must do certain things, and by law we cannot or must not do certain other things. This is often too easily forgotten by the people at large or is not understood at all. Our duty, however, is to govern the city within the law. And this is often a more difficult task than we think. Besides the direct limitations of our power to act in general ways, we find many specific laws which must claim our attention. When, for example, the State says we must establish rifle ranges or hospitals or playgrounds the duty is plain. The policy of the thing is no longer a question; the duty on us is to find and determine the method of carrying out that policy. So we find negative controls. For instance, we cannot fix the rates of fares in street railway franchises or exact payments for or limit the terms of such franchises, nor take the land of private persons without adequate payment, and then only so much may be taken as is actually required for really public use. Nor can we change the personnel of various departments without the required formalities.

In the matter of finance we again see that we are hedged about by many of these controls or legal requirements. Our income, our expenditure, our borrowing capacity and our debt are all subject to more or less restriction. We ought all to be familiar with this, for a thorough knowledge and understanding of it will be of greatest service in forming judgments as to how

to vote on any given proposition. And it is also true that a careful study of our powers with reference to finance will remove some questions from the so-called and uncertain field of politics to the more certain realm of business. I urge upon you that you learn how taxes are assessed and collected, how this money can or must be expended, how and for what purposes and within what limits the city may borrow money, and how such borrowed money can or must be paid. These are practical, vital questions, and without a clear understanding of them you cannot hope to fulfil to the highest degree of efficiency your office.

In addition to the controls to which we are subject by reason of our relation to our population or to the State, we find a handicap in another way. We have heard much lately about efficiency in business enterprises. But it is probably true that a private business and a municipal corporation are different in important particulars. The more cumbrous organization of the latter and its great degree of decentralization make it impossible to secure from the expenditure of the same money the same results — there is, in other words, a smaller efficiency in the latter. It is perhaps unfortunate that it is true, but governmental enterprises have always been more costly than private enterprises, and strive though we may to overcome this, we ought so far to take it into account, as to allow somewhat for it in our calculation.

In the last place, in speaking of the liabilities which face us, the people are calling louder than ever before for improvements and comforts and conveniences, all to be built or furnished at public expense and maintained from the public purse. We all enjoy these, and they add to the pleasure of life in the community, but they certainly do call for a constantly increasing scale of expenditure. These calls are hardest to refuse and yet we must remember that they, too, must be paid for. If the public will pay, they can have these things, but in every case we have the problem of adjusting the welfare of the beneficiaries to the ability of the public treasury to stand the drain of these outlays. In most cases this will present for our thought the most complex kind of problem and call for the sanest kind of solution.

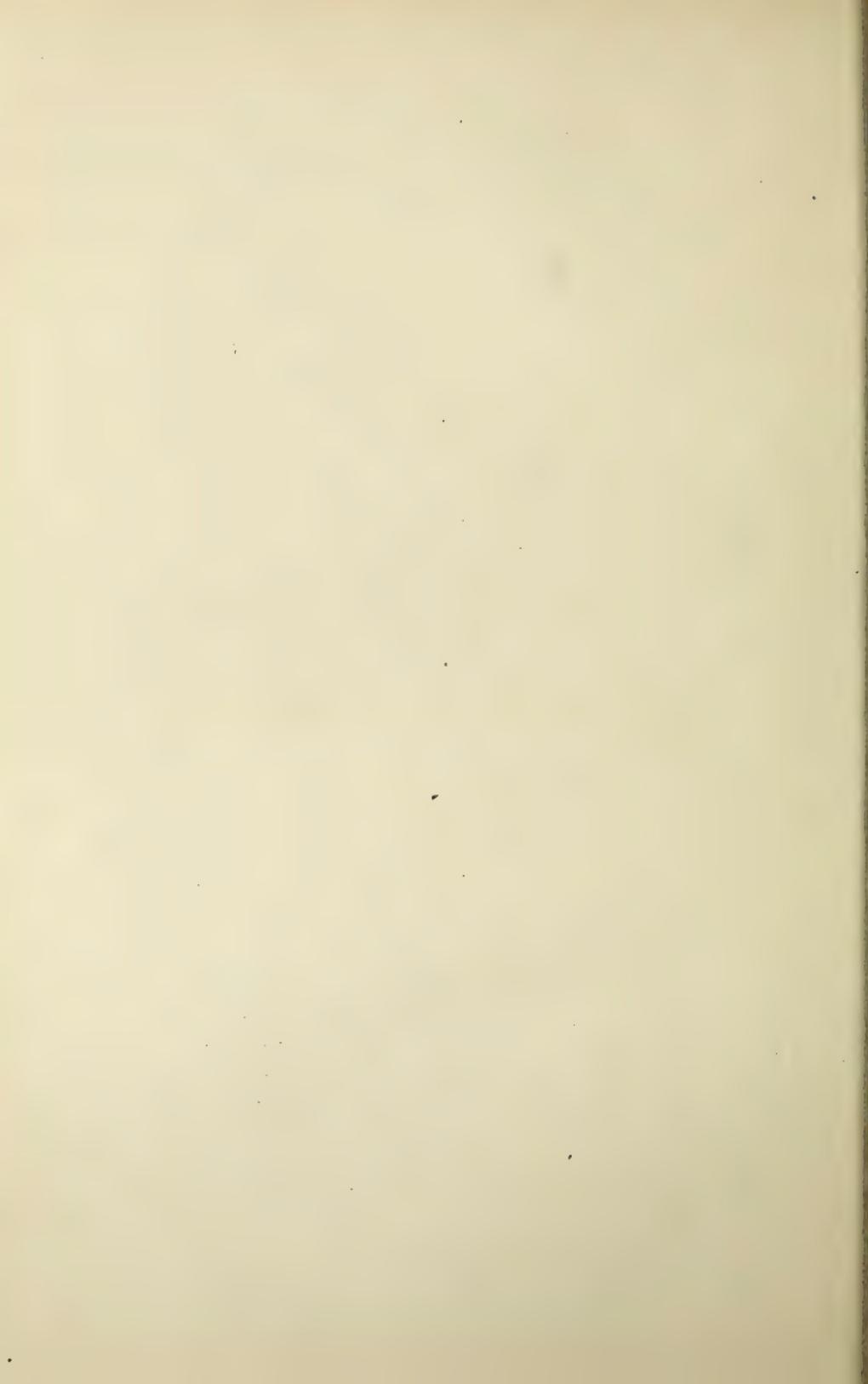
Such then is the field before us. In speaking to you I have so far departed from the custom of my predecessors as to make

no specific recommendations to you concerning the various departments, for I believe that until one is acquainted more closely than we now are with the inside of the departments, it is unwise to make specific and detailed suggestions for changes in them. Accordingly, from time to time as occasion may demand, I shall probably present to you such recommendations as I may have for changes in any of the city affairs, with my reasons for referring to the same. I wish it understood that at any time I shall welcome suggestions, not only from you, but from any person whatsoever in the city. Such suggestions will be received and heard and will be acted upon so far as its merits may seem to entitle it to consideration.

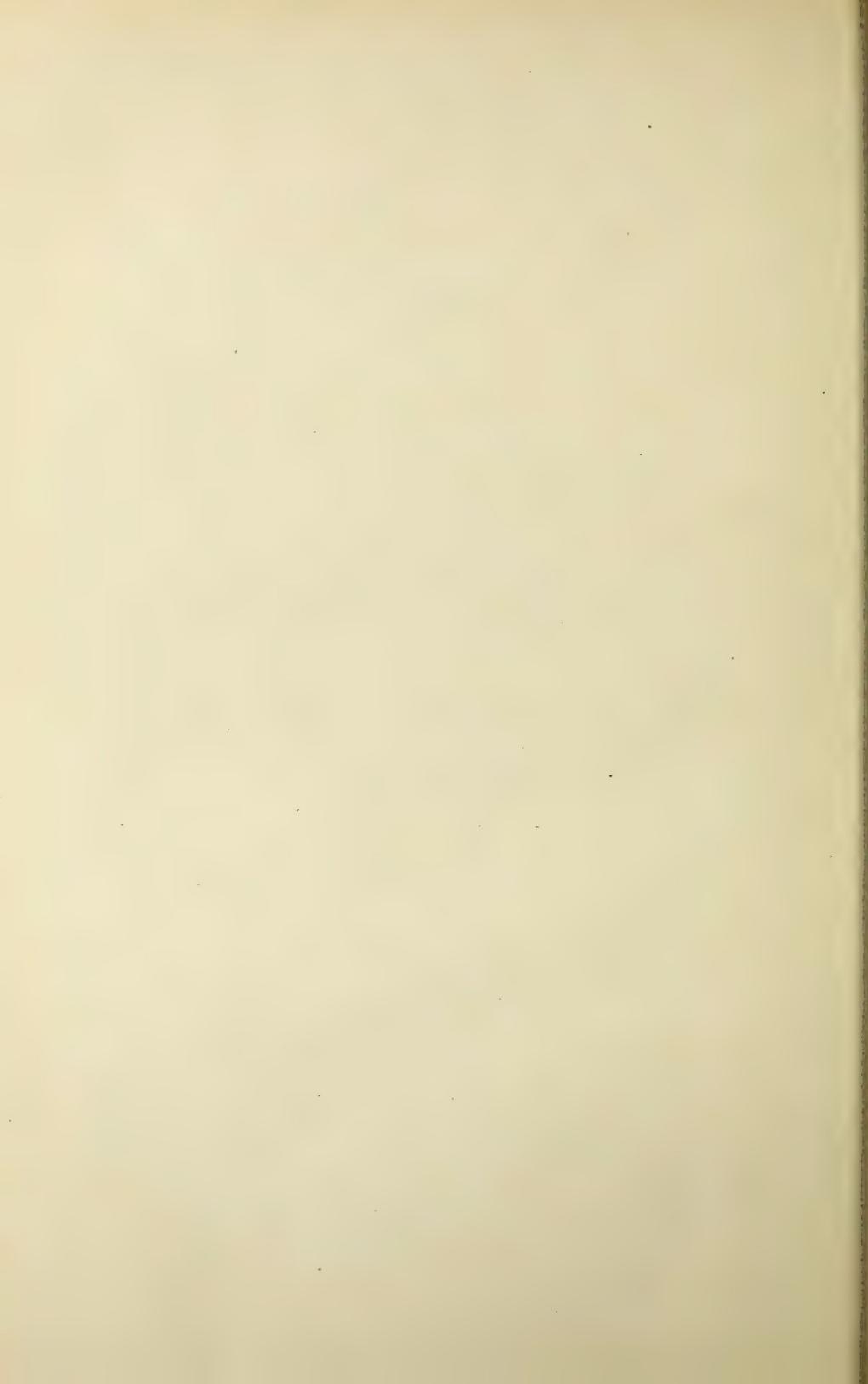
Our problem being what it is, you can readily see that your office is one to be exercised with patience and caution and foresight. No one who acts from motives of personal advantage or from a desire to favor certain persons or localities above others ought to sit in our municipal council. Such one cannot be a councillor for the whole people or the whole city. This, at least, the citizens have a right to ask, and this is the least that we can pledge.

I will say in conclusion that I believe we are all proud of the fact that we live in New England, which in reality is God's country. It is the best part of the world.

Fitchburg is one of New England's most prosperous cities. Her people live on the highest order of civilization. They are good law-abiding citizens who respect the principle of equal rights. Her industries are of the highest order and are owned almost entirely by local capital and controlled by men who make their homes here. Her goods are shipped all over the world. Her past record is creditable and her future is promising. The administration of her affairs for the coming year is this day placed in our hands. To build her larger so far as area is concerned is not of so much importance as to see that what we have is the best possible, according to our means and ability to make it. I feel sure that our associations will be pleasant, and that the city will receive benefit through our efforts under the principle that a "a man's strength measures his duty to others, not his claim on them."



GOVERNMENT AND OFFICERS
OF THE
CITY OF FITCHBURG
FOR 1911



GOVERNMENT AND OFFICERS

OF THE

CITY OF FITCHBURG

FOR 1911

MAYOR,

HON. M. FREDERICK O'CONNELL

22 Prospect Street.

ALDERMEN.

President, JOEL JOEL.

WARD 1.—JOHN B. FELLOWS, 27 Linden street.

WARD 2.—FRANK P. ALLEN, 407 Main street.

WARD 3.—FRANK H. FOSS, 68 Arlington street.

WARD 4.—JAMES PIGGOTT, 72 Mt. Vernon street.

WARD 5.—JOEL JOEL, 43 Highland avenue.

WARD 6.—JOHN C. SMITH, 40 Smith street.

CITY CLERK

WALTER A. DAVIS, 71 View street.

COUNCILMEN.

President, WILLIAM P. ESPIE.

WARD ONE.

JOHN W. DOOLING, 579 Water street.

JOHN F. McDOWELL, 6 Crown street.

JOHN B. MORAN, 4 Hobson street.

WARD TWO.

VICTOR GUAY, 4 Fairmount place.

GEORGE H. MILLER, 25 Daniels street.

FRANCIS H. TAYLOR, 90 Kimball street.

WARD THREE.

WILLIAM P. ESPIE, 840 Westminster Hill road.

BENJAMIN F. McCauliff, 37 River street.

EDWARD A. MCINTIRE, 421 Ashburnham street.

WARD FOUR.

CLARENCE L. CHANDLER, 61 Fox street.

PERCY B. HITCHCOCK, 47 Mt. Vernon street.

FORREST G. SMITH, 14 Longwood avenue.

WARD FIVE.

WILLIAM E. DEMPSEY, 14 Pearl Hill road.

LYMAN E. NEWTON, 132 Pearl street.

HENRY G. PEARSON, 63 Congress street.

WARD SIX.

NAPOLEON J. CADORETTE, 462 Water street.

JAMES H. SHEEHAN, 22 Fulton street.

JOHN J. SWEENEY, 11 Second street.

Clerk, HARRY P. CASEY, 9 Nutting street.

JOINT STANDING COMMITTEES
FOR 1911.

FINANCE—Mayor O'Connell, Alderman Joel, President Espie, Councilmen Dooling and Sheehan.

ACCOUNTS—Alderman Fellows, Councilmen Miller and Smith.

PRINTING—Mayor O'Connell, President Espie and Councilman Moran.

CLAIMS—Aldermen Joel and Piggott, Councilmen McCauliff, Hitchcock and Pearson.

HIGHWAYS—Aldermen Joel, Allen and Smith, Councilmen Dooling, Guay, McIntire, Smith, Dempsey and Sheehan.

WATER—Aldermen Smith and Piggott, Councilmen Moran, Miller and Sweeney.

BUILDINGS—Alderman Fellows, Councilmen Pearson and Chandler.

FIRE DEPARTMENT—Aldermen Foss and Allen, Councilmen Miller, McDowell and Sheehan.

MILITARY—Alderman Allen, Councilmen McCauliff and Pearson.

FUEL AND LIGHTING STREETS—Alderman Smith, Councilmen Taylor and Cadorette.

CITY PROPERTY—Aldermen Foss and Smith, Councilmen McDowell, Guay and Cadorette.

SALARIES—Aldermen Piggott and Foss, Councilmen McCauliff, Moran and Dooling.

EDUCATION—Aldermen Allen and Fellows, Councilmen Chandler, Newton and McIntire.

LEGISLATIVE AFFAIRS—Aldermen Piggott and Joel, Councilmen Taylor, Cadorette and Chandler.

STANDING COMMITTEES, BOARD OF ALDERMEN.

POLICE—Aldermen Piggott, Joel and Allen.

LICENSES—Mayor O'Connell, Aldermen Allen and Joel.

ENROLLMENT—Aldermen Foss and Smith.

ELECTION RETURNS—Aldermen Piggott and Foss.

BILLS IN SECOND READING—Aldermen Smith and Fellows.

COMMITTEE TO READ RECORDS—Aldermen Joel and Fellows.

STANDING COMMITTEES, COMMON COUNCIL.

BILLS IN SECOND READING—Councilmen McIntire and Guay.

ELECTIONS—Councilmen Dempsey, Taylor and Sweeney.

ENROLLMENT—Councilmen Dooling and Hitchcock.

COMMITTEE TO READ RECORDS—Councilmen McDowell and Newton.

JOINT SPECIAL COMMITTEE.

RECOMMENDATIONS ON MAYOR'S INAUGURAL—Aldermen Joel and Smith, President Espie, Councilmen Sheehan and Taylor.

ON CITY FARM INVESTIGATION—Aldermen Foss and Smith, President Espie, Councilmen Sweeney, Taylor and Smith.

CITY OFFICIALS.

Treasurer,	HERBERT G. MORSE.
Collector of Taxes,	HERBERT G. MORSE.
Deputy Collector of Taxes,	{ *G. Fred P. DAY. †EDWARD M. GRAVES.
City Clerk,	WALTER A. DAVIS.

*Resigned June 20, 1911.

†Appointed June 20, 1911.

Auditor of Accounts,	FRANK D. PAGE.
Superintendent of Streets,	MICHAEL J. HOGAN.
City Engineer,	TIMOTHY J. SHEEHAN.
City Solicitor,	JOHN F. McGRATH.
City Physician,	GEORGE P. NORTON, M.D.
Superintendent of Water Works and Water Registrar,	A. W. F. BROWN.
Chief of Police,	APOLLOS Q. THAYER.
Superintendent of Fire Alarm Telegraph,	GEORGE F. JEFTS.
Inspector of Wires,	GEORGE F. JEFTS.
Inspector of Milk and Petroleum,	JOHN F. BRESNAHAN.
Sealer of Weights and Measures,	JAMES A. SHEA.
Inspector of Buildings, Elevators and {	*JOHN H. KIRBY.
Superintendent of Public Buildings,	†JOSEPH D. O'KEEFFE.
Clerk Overseers of the Poor,	ROBERT M. JONES.
Superintendent of Almshouse,	EZRA COLEMAN.
Matron of Almshouse,	MRS. EZRA COLEMAN.
Chief Engineer of Fire Department,	TIMOTHY F. MURNANE.
Inspector of Animals,	HENRY D. CLARK, D. V. S.
Inspector of Meats and Provisions,	HENRY D. CLARK, D. V. S.
Clerk of Committees,	HARRY P. CASEY.
City Messenger,	CHARLES T. CUSHING.

ASSESSORS OF TAXES.

Horace M. Flynn, <i>Chairman</i>	term expires 1914.
Ira G. Wilkins, <i>Clerk</i> ,	term expires 1912.
Charles H. Morse,	term expires 1913.
Office, City Hall Building.	

ASSISTANT ASSESSORS, 1911.

- Ward 1—Fred A. Adler.
- Ward 2—Arthur M. Belliveau.
- Ward 3—Sullivan W. Huntley.
- Ward 4—Hiland C. Hitchcock.
- Ward 5—Charles H. Glazier.
- Ward 6—John P. Gallagher.

^{*}Died July 5, 1911.[†]Appointed July 18, 1911.

OVERSEERS OF THE POOR.

M. Fred O'Connell, *Mayor ex-officio.*

William P. Espie, *President ex-officio.*

John R. Smith,	term expires 1912.
Benjamin A. Cook,	term expires 1913.
Willard L. Humes,	term expires 1914.

Clerk of Board, Robert M. Jones.

Acting Clerk, Willard L. Humes.

Office, City Hall Building.

WATER COMMISSIONERS.

Arthur A. Train, <i>Chairman,</i>	term expires 1912.
Thomas C. Sheldon,	term expires 1913.
James A. Smith,	term expires 1914.
<i>Supt. of Water Works and Clerk of Board</i> , A. W. F. Brown.	
Office, Water Works Building, 104 River street.	

BOARD OF STREET COMMISSIONERS.

Thomas A. Monahan, <i>Chairman,</i>	term expires 1914.
Joseph A. Rivers,	term expires 1912.
David C. Dacey,	term expires 1913.
<i>Clerk and Engineer</i> , Timothy J. Sheehan.	
<i>Supt.</i> , Michael J. Hogan.	
<i>Timekeeper</i> , Eugene Oakman.	

SEWAGE DISPOSAL COMMISSION.

Arthur H. Lowe,	David M. Dillon,	Daniel A. Boyle.
<i>Clerk of the Board, Chief Engineer and Supt.</i> , David A. Hartwell.		
<i>Consulting Engineer</i> , Harrison P. Eddy.		
Office, Fitchburg Savings Bank Building, 352 Main street.		

BOARD OF LICENSE COMMISSIONERS.

Frederick A. Currier, 35 Mt. Vernon street,	
<i>Chairman and Secretary</i> ,	term expires June 1, 1917.
John E. Dwyer, 19 Boylston street,	term expires June 1, 1913.
Patrick J. Murray, 472 Fairmount street,	term expires June 1, 1915.

BOARD OF HEALTH.

Frederick H. Thompson, M. D., *Chairman*, term expires 1913.
James Barr, term expires 1912.
Dwight S. Woodworth, term expires 1914.
Bacteriologist, Atherton P. Mason, M. D.
Agent, Frederick R. Houghton.
Inspector of Plumbing, John F. Bresnahan.
Inspector of Milk, John F. Bresnahan.
Inspector of Meats and Provisions, Henry D. Clark, D. V. S.
Office, City Hall Building.

INSPECTOR OF ANIMALS.

Henry D. Clark, D. V. S.

BOARD OF FIRE ENGINEERS.

Chief, Timothy F. Murnane.
Assistant Chief, H. H. Wheelock.
Second District Chief, J. S. Thompson.
Third District Chief, Henry J. Hyatt.

TRUSTEES OF PUBLIC BURIAL GROUNDS.

Henry O. Putnam, *Chairman*, term expires 1912.
Ira G. Wilkins, *Clerk*, term expires 1914.
Albert G. Liversage, term expires 1913.
Superintendent of Public Burial Grounds, Willard A. Lowe.
Office, City Hall Building.

CIVIL SERVICE EXAMINERS.

Walter A. Davis, Frederick Fosdick,
Ernest W. Gilson.

BOARD OF REGISTRARS OF VOTERS.

Daniel F. Sullivan, *Chairman*, term expires May 1, 1912.
John B. LaRiviere, term expires May 1, 1913.
J. Frank Fisher, term expires May 1, 1914.
Walter A. Davis, *ex-officio Clerk*.

PARK COMMISSIONERS.

Henry F. Coggshall, <i>Chairman,</i>	term expires 1914.
John Shirreffs,	term expires 1912.
John H. Daniels,	term expires 1913.
Dwight S. Woodworth, <i>Clerk,</i>	term expires 1915.
Harry G. Townend,	term expires 1916.

TRUSTEES OF BURBANK HOSPITAL.

Mayor M. Fred O'Connell, *Chairman, ex-officio,*
 President of Common Council, William P. Espie, *ex-officio.*
 City Treasurer, Herbert G. Morse, *ex-officio.*

FOR ONE YEAR.

Henry A. Willis,	Charles F. Baker,
Albert H. Burgess,	Elliot N. Choate,
	Henry McGrath.

FOR TWO YEARS.

Benjamin D. Dwinnell,	Ernest P. Miller,
Frederick H. Thompson,	Charles H. Rice,
	Frank O. Hardy.

FOR THREE YEARS.

Alvah Crocker,	Charles E. Ware,
*Henry T. Page,	Charles T. Crocker,
Herbert I. Wallace,	Daniel Simonds.

Clerk of Board of Trustees and of Executive Committee, Wilbur W. Henry.

Vice-Chairman, Alvah Crocker.

Treasurer, Wilbur W. Henry.

Auditors, Elliot N. Choate and Albert H. Burgess.

Executive Committee, Mayor, *Chairman*, President Common Council, *ex-officiis*, Charles T. Crocker, three years, Charles F. Baker, two years, Albert H. Burgess, one year.

Finance Committee, Mayor, *Chairman*, City Treasurer, *ex-officiis*, Henry McGrath, three years, Frank O. Hardy, two years, Herbert I. Wallace, one year.

*Died Sept. 23, 1911.

HOSPITAL STAFF.

Surgeons, Dr. W. F. Sawyer, Dr. A. P. Lowell, Dr. F. H. Thompson, Jr.

Assistant Surgeons, Dr. R. A. Rice, Dr. R. A. Morgner, Dr. G. P. Norton.

Consulting Surgeons, Dr. E. P. Miller, Dr. F. H. Thompson.

Physicians, Dr. E. L. Fiske, Dr. E. J. Tully, Dr. L. F. Baker.

Assistant Physicians, Dr. F. M. McMurray, Dr. C. B. Gay, Dr. B. W. Carey.

Consulting Physician, Dr. C. H. Rice.

Consulting Orthopædic Surgeon, Dr. W. R. MacAusland, Boston.

Visiting Oculists and Aurists, Dr. A. F. Rodrick, Dr. J. A. Barton.

Bacteriologist, Electro-Therapeutist and Pathologist, Dr. C. H. Jennings.

Non-Resident Consulting Surgeons, Harry W. Goodall, Boston, Arthur K. Stone, Boston, Charles H. Dunn, Boston.

Non-Resident Consulting Physicians, Charles L. Scudder, Boston, Fred. B. Lund, Boston, John T. Bottomley, Boston.

Superintendent and Resident Physician, Freeman A. Tower, M.D.

Superintendent of Nurses, Miss Jessie A. Clarke.

Asst. Supt. of Nurses and Operating Room Nurse, Miss Helen Parks.

Housekeeper, Mrs. Howard Emerson.

Internes, Dr. L. M. Hagopian, Dr. Morris Frank.

POLICE DEPARTMENT.

Apollos Q. Thayer, *Chief*.

* Asahel Wheeler, *Captain*.

John Flood, *Captain*.

Hugh O. Irving, *First Lieut.* James F. Roy, *Second Lieut.*

Charles S. Brown, *First Sergeant*.

William E. Hackett, *Second Sergeant*.

Bernard H. Flaherty, *Inspector*. Thomas J. Godley, *Inspector*.

*Died Sept. 2, 1911.

PATROLMEN.

- | | |
|-----------------------------|--------------------------|
| 1. Arthur M. Sanderson. | 15. David J. Whittemore. |
| 2. Charles F. Donovan. | 16. Leoda Guenette. |
| 3. Herbert L. Flint. | 17. William H. Grant. |
| 4. John B. Gooch. | 18. Burton H. Clifford. |
| 5. Henry L. Kendall. | 19. John P. Riordan. |
| 6. Carlos L. Fallon. | 20. James W. Wilson. |
| 7. Fred H. Estabrook. | 21. Alfred J. Couture. |
| 8. George J. Bigelow. | 22. Walter W. Wallace. |
| 9. Winfred H. Whiting. | 23. Francis H. Flaherty. |
| 10. Alphonse L. Hebert. | 24. Edward R. Hart. |
| 11. William H. H. Shattuck. | 25. James J. Hanley. |
| 12. Albert R. Fellows. | 26. Emil Berndt. |
| 13. Daniel F. Moran. | 27. Valentin P. Cormier. |
| 14. Peter F. Murphy. | 28. Percy H. Fitzgerald. |

John Hassett, Janitor.

Apollos Q. Thayer, Keeper of Lock-ups.

Herbert L. Flint, Inspector of Claims.

RESERVE POLICE OFFICERS.

Patrick W. Burns,
Edward H. Chainey,
Ethan H. Washer,

John F. Crowley,
Frank B. Roddy,
Philip T. Kent.

SPECIAL POLICEMEN WITHOUT PAY.

Charles Bonner,
James Brown,
John D. Brown,
William R. Brown,
Joseph J. Butterfield,
William H. Burrage,
Harry T. Buttrick,
Anthony Couillard,
Richard D. Field,
William Frank,
Arthur M. Gokey,
Louis J. Gokey,

George H. Goodspeed,
James Gorman,
Thomas C. Gorman,
John G. Grubb,
Henry Hardman,
Edmond G. Hart,
Arthur S. Harris,
John Hassett,
Henry Hoppenen,
Leon W. Houghton,
Alfred Illingworth,
Augustus Judd,

Charles W. Kendall,	Myron W. Sarsfield,
Charles Lessard,	Timothy B. Snow,
L. Joseph Lomme,	Oziel Stockwell,
James W. Malone,	Peter Taylor,
Leonard B. Miles,	Albert L. Town,
Christian W. Moeckel,	Thomas F. Wilson,
Lyman Raymond,	John A. Worster,
John B. Rouselle,	William S. Winter.

SPECIAL POLICE WITHOUT PAY.

At Fitchburg High School,	Emory F. Burrage.
At Simonds Mfg. Co.,	{ Joseph J. Butterfield, Walter H. Lockwood, James Ward.
At Coggshall Park,	{ Patrick C. Driscoll, John T. Roach.
At Putnam Machine Co.,	{ Aaron F. Whitney, George O. Hutchins.
At Garde D'Honneur Hall,	Albert Laramie.
At County Jail,	{ Albert Blood, Henry D. Barker, Joseph L. Kindred, Warren P. Chapin, Edward F. Robbins, David H. Sweeney, Charles M. Caswell, Herbert J. Michaels. John T. Burke. John Congram. Edward A. Stone. Albert McKinney. Otto Flechtner.
At State Armory,	{ Charles Scott, Olaf Nelson.
At Unity Hall, W. F.,	{ Henry Burgess, Joseph Lally.
At Union Coal Co.'s Ice House,	{ Walter R. Holton, William B. Morhous.
At C. C. Church,	Herbert A. Divoll.
At German Church,	
At Burbank Hospital,	
At J. Cushing & Co.'s Mill,	
At State Normal School,	
At Safety Fund Bank Block,	

At Clarendon Street Schoolhouse,	Cleophas Forest.
At Y. M. C. A. Building,	Philip J. Little.
At Farm of A. A. Marshall,	W. E. Dean.
In Weights and Measures Dept.,	James A. Shea.
At Rollstone Bank Building,	Charles C. Litch.
At Belding Block,	Joseph N. Carriere.
In and around Crocker Hall,	Frank P. Allen.
At Shirreffs Worsted Co.,	{ Lawrence Boland, Jr.,
At Alpine Golf Club Grounds,	Morris O'Connor,
At Bijou Theatre,	W. Ernest Metcalf.
At Falulah Paper Co.,	Timothy Sullivan.
At Fitchburg Reform Club,	George F. Morrill.
For American Woolen Co.,	{ Joseph David,
At Public Library,	Antonio Cosco.
At Park Building,	James A. Farrell.
At Fitchburg Paper Co.,	{ Edward W. Pethybridge
At Harugari Hall,	Solomon Legnard.
At Iver Johnson's Arms & Cycle Works,	Joseph H. Liversage.
At Cushing Block,	Charles H. Minnich.
	John Carey.
	Ernest Frank.
	Herbert Y. Buttrick.
	Oscar C. Larson.

CONSTABLES.

Allen, Charles L.	Cushing, Charles T.
Aitchison, Harry	David, Joseph
Blood, Frank C.	Dwinnell, Benjamin D.
Bradley, Frank A.	Enright, John E.
Brigham, Albert A.	Fairbanks, Charles L.
Bullock, William S.	Flagg, Albert H.
Buttrick, Harry T.	Garside John W.
Carter, Edward F.	Gibson, Artemas A.
Caswell, Charles M.	Gibson Charles O.
Cotton, William W.	Gasonle, Patrick F.
Corley, Patrick T.	Gokey, Arthur M.
Cowdrey, Charles F.	Gokey, Louis J.
Currie, James	Gough, Charles E.

Gove, Horace F.	Morin, William
Hall, Fred D.	Peirce, Joseph M.
Hardman, Henry	Proctor, George B.
Hardy, William A.	Proctor, Russell K.
Hartwell, Bertillo L.	Putnam, J. Edward
Hassett, John	Roy, George J. H.
Hopponen, Henry	Russell, George F.
Kendall, Charles W.	Russell, Peter
Lewis, George T.	Sanderson, Lorenzo E.
Lord, George W.	Stone, Eugene F.
Lowe, Willard A.	Thompson, Samuel J.
McKinney, Albert	Worster, John A.
Moeckel, Christian W.	Wyman, Herbert W.

And all members of the Police Force.

CONSTABLES TO SERVE CIVIL PROCESS.

Frederick R. Houghton,	John F. Bresnahan,
Patrick F. Gleason,	John M. O'Neill,
Frederick M. Sanderson.	

SPECIAL DOG CONSTABLE.

John M. O'Neill.

TRUSTEES OF FREE PUBLIC LIBRARY. FOR ONE YEAR.

Joseph G. Edgerly,	John E. Kellogg,
Charles H. Rice, M. D.	*James F. D. Garfield

FOR TWO YEARS.

Henry A. Willis,	James J. Donnelly,
Herbert I. Wallace,	Henry A. Goodrich.

FOR THREE YEARS.

Frederick H. Thompson, M. D.	†D. Murray Travis,
Ezra S. Stearns,	Thomas F. Gallagher.

*Died Dec. 14, 1911.

†Resigned Oct. 3, 1911.

PUBLIC WEIGHERS OF BEEF, COAL, HAY, ICE, IRON, HEAVY
MACHINERY, BOILERS, AND OTHER ARTICLES.

Charles H. Glazier,

Malvina E. Glazier.

PUBLIC WEIGHERS OF COAL.

Leonard W. Aldrich,
William H. Ashline,
George A. Bauman,
Louis D. Burdo,
Henry Gadoury,
Carleton B. Hamblen,
Mamie E. Healey,
Geoffrey Hughes,
Jeremiah D. Keating,

Peter W. Lahti,
Edward Lapointe,
Charles Lessard,
Kenneth Macdonald,
Robert Marcy,
Thomas A. Monahan,
Frederick M. Morton,
Ferdinand Rousseau,
Nellie A. Ryan,

Charles P. Whitney.

PUBLIC WEIGHERS OF COAL, ICE, HAY, GRAIN AND OTHER
ARTICLES.

Willis B. Atherton,
Orin W. Delaney,
Alfred L. Greene,
John H. Holland,
Mary E. Kirby,
Amand Lamothe,
Pamelia LaRiviere,

Adolph Lenz,
Florence G. Leonard,
Leonora T. Lyons,
Joseph Normandin,
Nazaire J. St. Marie,
Elsie M. Tucker,
John E. Woods.

WEIGHERS OF COAL, WOOD PULP AND ALL GRADES OF
PAPER STOCK.

John Nelson Alquist,
Loring E. Corkum,
William P. Espie,
William C. Graves,

Amand Lamothe,
John Lynch,
Tracy J. Spring,
George R. Wallace, Jr.

PUBLIC WEIGHERS OF COTTON, COTTON YARNS AND OTHER
ARTICLES.

William H. Ashline,
John W. Day,
George D. Harper,
Clarence E. Hastings,

John F. Markham,
Henry J. Parker,
Joseph N. White,
Harry Shaw,

Robinson N. Thompson.

PUBLIC WEIGHERS OF STONE.

George A. Bruno,	Orin E. Litchfield,
Patrick J. Carey,	Clark T. Mitchell,
Fred S. Alden,	Willard C. Carter.

PUBLIC WEIGHERS OF IRON, STEEL, BRASS, LUMBER, ETC.

Albert H. Lawrence,	Fred S. Alden,
Charles H. Vickery,	Clark T. Mitchell,
Henry A. Greenwood,	Willard C. Carter,
	Walter A. Hardy.

MEASURERS OF WOOD AND BARK.

Leonard W. Aldrich,	Jeremiah D. Keating,
George A. Bauman,	Charles E. Lacey,
Joseph J. Butterfield,	Charles Lessard,
Charles T. Cushing,	Wm. A. McMullen,
George L. Duval,	J. Wilder Merriam,
Robert F. Fairbanks,	Thomas A. Monahan,
Albert H. Flagg,	Joseph Normandin,
Henry Gadoury,	Fred L. Rolph,
Timothy J. Gallivan,	Ferdinand Rousseau,
Henry J. Garno,	Nazaire J. St. Marie,
Alfred L. Greene,	Alvan O. Stickney,
Charles H. Greene,	Milan G. Twitchell,
	Harrison Upton.

SURVEYORS OF LUMBER.

William Aker,	John F. Lynch,
Joseph J. Butterfield,	Charles E. Mansfield,
Ornan S. Cook, Jr.,	Jerome Mossman,
John Z. Collette,	George F. Oliver,
John F. Desmond,	George H. Priest,
Herbert C. Eaton,	Joseph Plante,
Henry J. Garno,	Russell K. Proctor,
Bernard Hennessey,	Fred P. Ramsdell,
Edward O. Hill,	Ferdinand Rousseau,
Charles W. Kinsman,	Alvan O. Stickney,
Frank W. Lesure,	Nazaire J. St. Marie,
	George E. Wellington.

UNDERTAKERS.

Henry L. Sawyer & Co., 211 Main street.

James J. Phelan, 156 Water street.

John R. Smith, 181 Water street.

Joseph Charron, 42 Plymouth street.

Bolles & Partridge, 3 Lunenburg street.

FENCE VIEWERS.

Louis N. M. DesChenes,

William A. Hardy,

Thomas H. Shea.

FIELD DRIVER.

Martin C. Larkin.

POUND KEEPER.

* Charles L'Ecuyer.

JANITOR OF CITY HALL AND CITY MESSENGER.

Charles T. Cushing.

AGENT OF BOARD OF ALDERMEN TO FURNISH RELIEF TO U. S.
SOLDIERS AND SAILORS AND THEIR WIDOWS, UNDER
CHAPTER 79 OF THE REVISED LAWS.

Sidney Sibley.

SUITABLE PERSON TO PROPERLY BURY THE BODY OF ANY
HONORABLY DISCHARGED U. S. SOLDIER OR SAILOR OR
THEIR WIVES, WIDOWS OR DEPENDENT MOTHERS,
IN ACCORDANCE WITH CHAP. 468, ACTS OF
1909, OF THE REVISED LAWS.

Ira G. Wilkins.

FOREST WARDEN AND SUPERINTENDENT FOR THE SUPPRES-
SION OF THE GYPSY AND BROWN TAIL MOTH.

William W. Colton.

*Died August 10, 1911.

ELECTION OFFICERS

WARD ONE

Warden—George D. Whittemore, 96 Milk street.

Clerk—Erving F. Lowe, 22 Charles street.

Inspectors—John B. Fellows, 27 Linden street; Frederic Ryan,
9 Crown street; Thomas P. A. Kelley, 53 Spruce street;
James W. Malone, 47 Albee street.

Deputy Warden—John R. Smith, 179 Water street.

Deputy Clerk—William E. Lyons, 51 South street

Deputy Inspectors—George H. Sprague, Jr., 46 Laurel street;
Jean Robichaud, 58 Walnut street; J. Everett Luscombe,
3 Milk street; Peter B. Kielty, 80 South street.

WARD TWO

Warden—Louis N. M. DesChenes, 50 Daniels street.

Clerk—Michael J. Madigan, 60 Wachusett street.

Inspectors—Herbert R. Higginbotham, 12 William street;
Horace M. Flynn, 110 Depot street; Andrew Pratt, 294
Pratt road; John H. Quigley, 63 Wachusett street.

Deputy Warden—Albert F. Francis, 411 Main street.

Deputy Clerk—William L. Hayes, 27 Westminster street.

Deputy Inspectors—Henry Cohen, 206 Fairmount street; Vic-
tor Guay, 4 Fairmount place; R. Everett H. Tucker, 39
Newton place; Frank P. Allen, 407 Main street.

WARD THREE

Warden—George H. Priest, 464 Main street.

Clerk—Charles H. Vickery, 53 Prospect street.

Inspectors—John H. Daniels, 45 Prospect street; John Mitch-
ell, 154 Ashburnham street; John W. Garside, 117 Ash-
burnham street; Lawrence F. Dacey, 19 Ashburnham st.

Deputy Warden—Martin F. Mongovan, 22 Vernon street.

Deputy Clerk—Thomas A. Monahan, 43 Fairview street.

Deputy Inspectors—Eddie E. Cleveland, 23 School street; John
E. Burke, 89 Temple street; Charles W. Baldwin, 12
Mechanic street; John T. Keefe, 1027 River street.

WARD FOUR

Warden—Eugene F. Stone, 372 Main street.

Clerk—Ernest W. Gilson, 86 Mt. Vernon street.

Inspectors—Frank H. Brown, 69 Fox street; Matthew Nolan, 214 Blossom street; William H. Peabody, 61 Pleasant street; Patrick F. Gleason, 20 Prichard street.

Deputy Warden—William D. Preston, 97 Blossom street.

Deputy Clerk—Charles T. McMurray, 44 Mt. Vernon street.

Deputy Inspectors—Henry C. Patch, 19 High street; Marcus A. Coolidge, 164 Blossom street; Percy B. Hitchcock, 47 Mt. Vernon street; James Piggott, 72 Mt. Vernon street.

WARD FIVE.

Warden—Hiram H. Lamb, 85 Day street.

Clerk—Thomas J. Lambert, 48 North street.

Inspectors—Cornelius P. Hurley, 95 Snow street; Albert E. Culley, 67 Congress street; John J. Shea, 46 Myrtle avenue; Frank C. Hoyt, 61 Day street.

Deputy Warden—Charles S. Holden, 26 Pacific street.

Deputy Clerk—Charles L. Joel, 9 Clinton street.

Deputy Inspectors—Joseph G. Flynn, 50 Willow street; Matthew Tait, 37 Highland avenue; George H. Gorman, 26 Morris street; Richard E. Littlehale, 124 Highland avenue.

WARD SIX.

Warden—James J. Phelan, 156½ Water street.

Clerk—Jerome Mossman, 15 Bluff avenue.

Inspectors—John E. Barnes, 29 Boylston street; Henry E. Cowdrey, 33 Goodrich street; Michael Houston, 50 Clyde street; George F. Albee, 65 Lawrence street.

Deputy Warden—John J. Sweeney, 11 Second street.

Deputy Clerk—William S. Fairbanks, 89 Lincoln street.

Deputy Inspectors—Frank A. Wood, 36 Winter street; Willis B. Chandler, 72 Lawrence street; James J. McElroy, 20 Middle street; George W. Lord, 22 Hancock street.

**SALARIES OF CITY OFFICERS
FOR 1911.**

Mayor,	\$2,000 00
Chairman Board of Health,	300 00
City Clerk,	1,500 00
City Auditor,	1,400 00
City Treasurer and Collector of Taxes,	2,000 00
City Engineer,	1,500 00
City Physician,	1,000 00
Superintendent of Streets,	1,500 00
Water Commissioners, each, per year,	100 00
Clerk of Common Council,	100 00
Clerk of Committees,	150 00
Almoner of Overseers of the Poor,	900 00
Superintendent of Almshouse,	750 00
Matron at Almshouse,	300 00
Superintendent of Water Works and Water Registrar,	1,800 00
Chief Engineer of Fire Department,	1,500 00
Assistant Chief of Fire Department, per year,	275 00
Two District Chiefs, each, per year,	225 00
Engineers of Steamers, each, per year,	150 00
Superintendent of Fire Alarm Telegraph and In- spector of Wires,	1,200 00
Call Firemen, each, per year,	150 00
Captains of Hose, Hook and Ladder, and Fire Com- panies—Call Men,	160 00
Lieutenants of Hose, Hook and Ladder, and Fire Companies—Call Men,	155 00
Permanent Men of Fire Department:	
Captains, each, per day,	2 75
Lieutenants, each, per day,	2 70
Drivers and other Permanent Men, each, per day,	2 65
Assessors, each, per year,	1,000 00
Assistant Assessors, each, per day,	3 00
Chief of Police, per year,	1,400 00
Policemen, each, per day—First year,	2 50
Second year,	2 60
Third year,	2 75
Captain of Police, per day,	3 25

First Lieutenant of Police, per day,	\$3 10
Second Lieutenant of Police, per day,	3 00
Inspector of Police, per day,	3 25
Sergeant of Police, per day,	2 85
Reserve Police Officers, per day,	2 50
City Messenger, per year,	800 00
City Solicitor, per year,	1,000 00
Wardens, Inspectors and Ward Clerks, each, per day,	6 00
Registrars of Voters, per hour,	40
Superintendent of Public Buildings and Inspector of Buildings, per year,	1,000 00
Inspector of Animals, per year,	400 00
Inspector of Provisions, per year,	200 00
Agent of Board of Aldermen to furnish relief to U. S. Soldiers and Sailors and their Widows, per year,	200 00
Chairman Board of License Commissioners, at rate per year of	300 00
Other License Commissioners, each, at rate per year of	200 00
Street Commissioners, each, per year,	300 00
Sealer of Weights and Measures, per year,	800 00
With running expenses not to exceed	250 00
Clerk of Street Commission, per year,	100 00

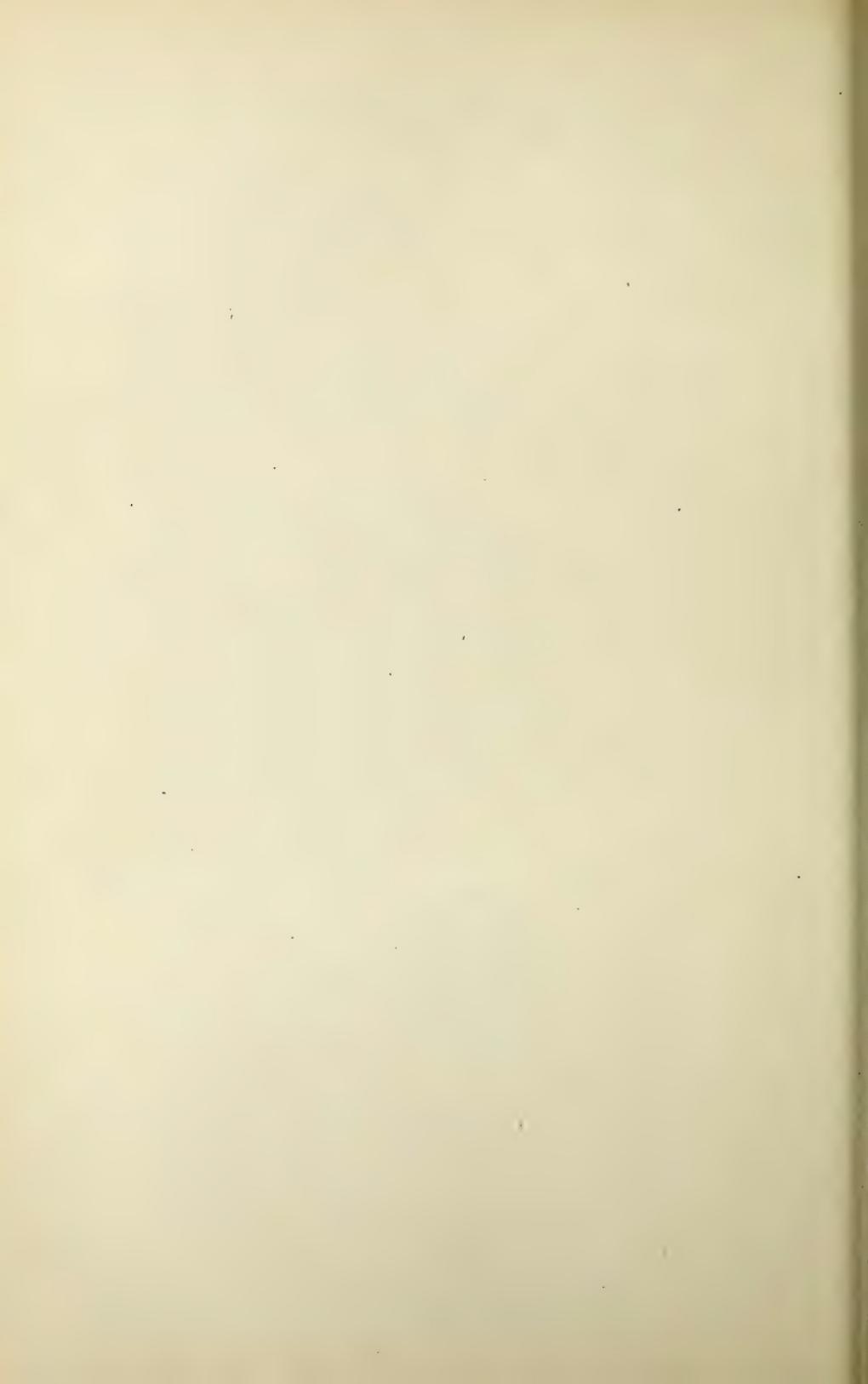
THIRTY-NINTH
ANNUAL REPORT
OF THE
SCHOOL COMMITTEE

OF THE
CITY OF FITCHBURG
MASSACHUSETTS

1911



FITCHBURG :
H. M. DOWNS PRINTING CO.
1912



SCHOOL BOARD

Organization for 1911.

HON. M. FREDERICK O'CONNELL, Mayor, *ex-officio*,
Chairman, 22 Prospect street.

WILLIAM P. ESPIE,

President of the Common Council, *ex-officio*, 840 Westminster Hill road, West Fitchburg.

		Term expires
Ward 1.	Peter F. Ward, 29 Linden street, Patrick Donlon, 5 Crown street, John R. Smith, 181 Water street,	January, 1912 January, 1913 January, 1914
Ward 2.	Patrick T. Corley, 25 Kimball place, James J. Ryan, 83 Princeton road, John F. Hayes, 27 Westminster street,	January, 1912 January, 1913 January, 1914
Ward 3.	Walter A. Hartwell, 54 Fairview street, George V. Upton 19 Prospect street, James Chalmers, 52 School street,	January, 1912 January, 1913 January, 1914
Ward 4.	William L. Walker, 31 Myrtle avenue, Arthur L. Snell, 146 Pleasant street, Warner M. Allen, 26 Upland street,	January, 1912 January, 1913 January, 1914
Ward 5.	J. Milton Hubbard, 22 Highland avenue, Henry A. Goodrich, 31 Highland avenue, Arthur J. Covell, 71 Myrtle avenue,	January, 1912 January, 1913 January, 1914

Ward 6.	Edward B. Saunders, 31 Atlantic avenue,	January, 1912
	Charles Smith, 41 Smith street,	January, 1913
	James F. Kane, 29 Cane street,	January, 1914

SECRETARY OF BOARD AND SUPERINTENDENT OF SCHOOLS

Joseph G. Edgerly.

CLERK

Miss Emilie B. Hall.

TRUANT OFFICER AND CUSTODIAN OF SUPPLIES

Nathan C. Upham.

MEDICAL INSPECTORS

Raymond C. Jones, M. D.,
Frederick H. Thompson, Jr., M. D.

SCHOOL COMMITTEE ROOMS

Rooms 13 and 14—City Hall.

Office Hours—Term Time.

Superintendent—4 to 5 p. m., school days.

Clerk—School days, 8.15 A. M. to 12 M., 2 to 5.30 P. M. Saturdays, 9 A. M. to 12 M.

Truant Officer and Custodian of Supplies—School days, 4 to 5.30 P. M. Saturdays, 9 A. M. to 1 P. M.

REGULAR MEETINGS OF THE BOARD

At Common Council Room, City Hall, first Monday in each month, excepting in July, August and September.

VISITING COMMITTEES

Division 1. HIGH SCHOOL AND CENTRAL GRAMMAR SCHOOL.
Messrs. J. R. Smith, Hayes, Upton, Snell, Goodrich and Charles Smith.

Division 2. PLEASANT STREET AND ACADEMY STREET.
Messrs. Snell, Ward, Upton, Allen and Corley.

Division 3. DAY STREET, HIGHLAND AVENUE, EDGERLY
SCHOOL, PRACTICAL ARTS SCHOOL AND PEARL HILL.
Messrs. Goodrich, Hubbard, Covell, J. R. Smith and
Donlon.

Division 4. LUNENBURG STREET, GOODRICH STREET, MAV-
ERICK STREET AND SOUTH FITCHBURG. Messrs. Charles
Smith, Walker, Kane, Ryan and Chalmers.

Division 5. NOLAN SCHOOL, HOSMER SCHOOL, LAUREL
STREET AND ROLLSTONE STREET. Messrs. Hubbard,
Ward, Saunders, Walker and Donlon.

Division 6. CLARENDON STREET, SCHOOL STREET AND DEAN
HILL. Messrs. Hartwell, Corley, Covell, Chalmers and
Allen.

Division 7. ASHBURNHAM STREET, WACHUSETT AND WOOD-
BURY. *Messrs. Hayes, Kane, Saunders, Ryan and Hart-
well.

Evening Schools. Messrs. Hubbard, Ward, Walker, Snell and
Upton.

Private Schools. Messrs. J. R. Smith, Kane, Charles Smith,
Allen and Hayes.

STANDING COMMITTEES.

Finance, Accounts and Estimates: Messrs. Hubbard, Ward,
Ryan, Upton, Allen, Kane, the Mayor and the President of
the Common Council.

Text Books and Course of Study: Messrs. J. R. Smith, Hayes,
Chalmers, Snell, Covell and Charles Smith.

Attendance: Messrs. Upton, Donlon, Corley, Snell, Goodrich
and Saunders.

Schoolhouses and Hygiene: Messrs. Charles Smith, Donlon, Ryan, Hartwell, Walker and Covell.

Music: Messrs. J. R. Smith, Corley, Chalmers, Walker, Goodrich and Saunders.

Drawing and Manual Training: Messrs. Ward, Hayes, Hartwell, Allen, Hubbard and Kane.

Teachers: Messrs. Snell, J. R. Smith, Ward, Hayes, Upton, Chalmers, Hubbard, Goodrich and Charles Smith.

Purchase and Distribution of Books and Supplies: Messrs. Hayes, Hartwell and Walker.

Kindergartens: Messrs. Ward, Corley, Chalmers, Snell, Hubbard and Charles Smith.

REPORT OF SCHOOL DEPARTMENT

The thirty-ninth annual report of the School Department of the city of Fitchburg is herewith presented.

STATISTICS.

POPULATION AND VALUATION.

Population of the city, census of 1910,	37,826
Estimated population 1911,	38,000
Assessed valuation of city 1911,	\$32,084,891 00
Valuation of school property, Dec. 1, 1911, land and buildings,	\$712,105 00
Personal property, furnishings and fixtures,	41,748 00
Total valuation school property,	————— \$753,853 00

ATTENDANCE FOR SCHOOL YEAR ENDING JUNE 30, 1911.

DAY SCHOOLS.

Whole number enrolled,	4,424
Average number belonging,	4,070.7
Average daily attendance,	3,824.2

EVENING COMMON SCHOOLS.

	Evenings in Session.	Enrollment	Average Attendance
Academy Street,	64	353	93.8
Clarendon Street,	72	105	66
Nolan School,	59	106	26.7
Ashburnham Street,	64	58	44.4
Total,		622	230.9

TABLE OF ATTENDANCE.

The following table shows the average number of pupils belonging and the average daily attendance at the respective day schools:

	Average No. Belonging.	Average Attendance.
High School,	715.5	675.8
Central Grammar,	158.0	151.5
School Street,	135.4	128.8
Pleasant Street and Academy Street,	587.6	553.1
Day Street,	139.2	130.6
Highland Avenue,	56.6	51.8
Edgerly,	256.5	234.6
Practical Arts,	214.4	202.0
Lunenburg Street,	133.7	119.9
Goodrich Street,	276.7	259.4
Maverick Street,	84.7	78.5
South Fitchburg,	135.8	129.5
Nolan School,	146.1	136.2
Hosmer School,	219.7	205.8
Laurel and Rollstone Streets,	341.7	329.0
Clarendon Street,	201.5	186.1
Ashburnham Street,	190.3	180.1
Wachusett,	25.4	23.9
Woodbury,	22.3	20.6
Dean Hill,	12.9	10.9
Pearl Hill,	16.7	16.1
<hr/>	<hr/>	<hr/>
Total,	4,070.7	3,824.2

TEACHERS IN DAY SCHOOLS, INCLUDING
KINDERGARTENS, FOR THE SCHOOL
YEAR 1910-11.

High School,	30
Central Grammar,	6
Pleasant and Academy Streets,	17
School Street,	4
Lunenburg Street,	4
Goodrich Street,	7

Maverick Street,	2
South Fitchburg,	4
Nolan School,	4
Hosmer School,	8
Laurel and Rollstone Streets,	9
Clarendon Street,	7
Ashburnham Street,	6
Wachusett,	1
Woobury,	1
Dean Hill,	1
Pearl Hill,	1
Model and Practice Schools,	18
	— 130

SPECIAL TEACHERS.

High School :

Physical Culture and Elocution, two days per week,	1
Singing, one lesson per week,	1

Grades below the High School :

Drawing,	1
Singing,	1
Cooking,	1
	— 5
	— 135

Additional teachers are required temporarily at various schools on account of the large number of pupils in attendance.

 SCHOOL REGISTRATION
 SEPTEMBER, 1911.

ENROLLMENT BY AGES

Age	Number Enrolled		
	Boys	Girls	Total
Under 5 years,	8	16	24
5 "	100	109	209
6 "	185	195	380
7 "	204	200	404
8 "	209	190	399

	Boys	Girls	Total
9 years	167	173	340
10 "	193	207	400
11 "	200	169	369
12 "	197	194	391
13 "	209	200	409
14 "	133	151	284
15 "	145	118	263
16 "	74	91	165
17 "	61	56	117
18 "	28	24	52
Over 19 "	9	3	12
	2,122	2,096	4,218

ENROLLMENT BY GRADES

	Boys	Girls	Total
Unclassified,	45	25	70
Kindergarten,	53	66	119
Grade 1,	253	248	501
" 2,	217	219	436
" 3,	197	178	375
" 4,	227	215	442
" 5,	203	193	396
" 6,	207	218	425
" 7,	183	172	355
" 8,	139	153	292
" 9, Practical Arts,	23		23

HIGH SCHOOL

Grade 9,	138	160	298
" 10,	100	104	204
" 11,	81	89	170
" 12,	48	52	100
Post Graduates,	8	4	12
	2,122	2,096	4,218

NOTE—Eighteen of those reported as unclassified were in the High School.

ENROLLMENT BY BUILDINGS

	Boys	Girls	Total
High School,	388	414	802
School street,	67	63	130
Pleasant and Academy streets,	349	332	681
Day street,	69	69	138
Highland avenue,	23	29	52
Edgerly,	120	134	254
Practical Arts,	146	106	252
Lunenburg street,	54	86	140
Goodrich street,	161	159	320
Maverick street,	42	27	69
South Fitchburg,	77	64	141
Nolan School,	77	65	142
Hosmer School,	126	124	250
Laurel and Rollstone streets,	166	165	331
Clarendon street,	108	92	200
Ashburnham street,	96	117	213
Wachusett,	17	15	32
Woodbury,	16	18	34
Dean Hill,	11	11	22
Pearl Hill,	9	6	15
	2,122	2,096	4,218

PAROCHIAL SCHOOLS

	Boys	Girls	Total
Immaculate Conception, Walnut st.,	139	130	269
St. Bernard's, First street,	321	296	617
St. Francis, South Fitchburg,	166	157	323
St. John's, West Fitchburg,	129	116	245
St. Joseph's, Columbus street,	563	543	1,106
	1,318	1,242	2,560
Total enrollment in the city,	3,440	3,338	6,778

SCHOOL CENSUS, 1911.

Ages	WARDS						Totals	Males	Females
	1	2	3	4	5	6			
5	93	250	95	36	57	131	662	313	349
6	108	281	113	47	64	150	763	385	378
7	132	259	108	56	45	151	751	383	368
8	100	259	117	55	56	154	741	379	362
9	103	243	101	47	45	165	704	386	318
10	95	286	98	52	44	169	744	379	365
11	98	240	90	50	61	129	668	342	326
12	101	262	99	50	50	156	718	362	356
13	90	263	100	39	65	130	687	347	340
14	113	239	84	56	56	136	684	308	376
Tot's	1,033	2,582	1,005	488	543	1,471	7,122	3,584	3,538

Number between 7 and 14 years: Males, 2,578; females, 2,435; total, 5,013.

SCHOOL CENSUS FOR TEN YEARS PREVIOUS TO 1911.

1901,	6,111	1906,	6,617
1902,	6,180	1907,	6,785
1903,	6,297	1908,	6,579
1904,	6,312	1909,	6,929
1905,	6,539	1910,	7,030

EXPENDITURES FOR THE YEAR ENDING
NOVEMBER 30, 1911.

SALARIES—TEACHERS.

High School,	\$32,084 08
Central Grammar School,	3,416 00
Model and Practice Schools,	18,137 59
Elementary Schools,	53,524 60
Evening Schools,	2,360 60

**DEPARTMENTAL SUPERVISORS—
EXCLUSIVE OF HIGH SCHOOL.**

Cooking,	\$815 00
Drawing,	800 00
Singing,	715 00
	—————
Superintendent of Schools,	2,850 00
	—————
Total salaries, teaching and supervision,	\$109,702 87
Transportation of pupils,	1,970 00
Truant Officer and Custodian of Supplies,	1,300 00
Clerical service,	680 00
Free text books and supplies—Common schools,	3,841 59
Free text books and supplies—High School,	1,809 96
Special supplies, Manual Arts department,	1,380 87
" " sewing department,	176 65
" " High School laboratories,	248 34
" " diplomas, High School,	42 40
" " herbarium, High School,	50 00
" " Evening Schools,	92 55
" " cooking department,	440 40
" " Kindergarten,	86 78
" " office, Superintendent,	23 41
Telephone service, office of Superin- tendent,	\$12 10
Telephone service, High School,	67 26
	—————
Tuning and repairing pianos,	79 36
Piano, Academy Street Kindergarten,	51 25
Printing and advertising,	50 00
Postage,	331 01
Enumeration of children,	106 81
Typewriter repairs,	326 33
Typewriters,	37 30
Gas and electric lights,	120 00
Medical inspection and school physician services to May 1,	929 51
Néostyle,	375 50
	36 00

Paper cutter,	\$51 50
Miscellaneous,	385 98
	—————
Total expenditures authorized by School Board,	\$124,726 37

RECEIPTS.

Appropriations:

Schools,	\$110,000 00
Books and incidentals,	9,000 00
	—————
	\$119,000 00
Tuition, non-residents,	719 50
Sale of books and supplies,	137 92
Overdraft in teaching account,	8 00
	—————
	\$119,865 42
Deficit,	4,860 95

Expenditures authorized by the City Council:

Fuel,	\$8,389 93
Janitor service,	10,033 78
Janitor's supplies,	335 99
	—————
	18,759 70

Expenditures authorized by Board of Health:

Medical inspection and school physician's services May 1 to December 1,	453 00
Total expenditures for schools,	\$143,939 07

The amount expended upon evening schools for the year is estimated at \$3,200, leaving an expenditure for day schools of \$140,739.07.

The cost per pupil in day schools was as follows:

Based upon whole number registered,	\$31 81
Based upon average whole number,	34 57
Based upon average daily attendance,	36 80

SCHOOL ACCOMMODATIONS.

A consolidation of the various ninth grades of the city was made in 1903. The consolidated grades which formed one school known as the "Central Grammar School" was placed in the high school building. The high school the year of the consolidation had an average daily attendance of 490. The average attendance the past year was 675.

Both the high school and the central grammar school could be well accommodated in the high school building eight years ago. Changes in courses of study at the high school have been made to such an extent, within the past few years, that more room is needed at the present time for the same number of pupils than was required at the time the consolidation went into effect.

It became evident one year ago that the entire building was needed for the high school, and accordingly the board decided to discontinue the central grammar school and to maintain five grammar schools, each with an eighth grade, the highest grade below the high schools. A change from the nine to eight grades in the elementary schools went into effect in 1908.

These five schools are located as follows: Pleasant Street, Goodrich Street, Ashburnham Street, Hosmer School and the Practical Arts School. Schools with grades one to six inclusive are maintained regularly at South Fitchburg, Laural Street and Clarendon Street, and in case a sufficient number, 20 or more pupils of grade 7 or 8 are enrolled, one or both of these grades may be retained at any of these schools.

The lack of room at the high school building was the cause of the discontinuance of the central grammar school and the establishing of several smaller schools. Experience had made it manifest that a larger number of pupils enter the high school from one central school than from several smaller schools combined and those who enter from such a central school are in general better fitted to take up high school work than are those who come from several smaller schools. There was however, no alternative. The entire building was needed for the high school and the manual training classes and existing conditions indicate that increased accommodations may be required in the future.

There is not at the present time any reasonable expectation that additional school rooms will be needed in the near future in other parts of the city, unless possibly at Wachusett. There are at the present time vacant rooms at South Fitchburg, Clar-endon Street, Ashburnham Street and Wachusett.

The building at Wachusett is the only one in the city containing more than one room in which modern ventilating and heating appliances are wanting. It is hoped that a satisfactory system will be installed in that building the coming year, and that changes in the building may be made with the view of enlarging the same in case more room shall at any time be needed in that part of the city.

SCHOOL REPORTS

Laws are enacted each year with reference to some features of school administration. The statute relating to school reports has for years remained unchanged. The framers of the law evidently intended that the citizens of the municipality should be kept informed of the policy of the school board. Other municipal boards report to the city council or to the "Town Meeting." The school committee report directly to the inhabitants of the city or town.

The school board of each city or town is required by the law of the Commonwealth to make a detailed report annually and cause the same to be printed for the use of the inhabitants and to transmit two copies to the State Commissioner of Education. Failure to comply with these requirements subjects a town—provided the town is entitled thereto—to a forfeiture of its share of the income of the State School fund.

A town whose valuation does not exceed two and one-half million dollars is entitled to some share of the income of the State School fund.

A town or city not entitled to a portion of this income, forfeits to the school fund two hundred dollars in case of failure to make report to the Commissioner of Education on or before the close of a school year.

It was the evident intention of the framers of the law that the school department should be kept in close contact with the inhabitants of the municipality. The schools were few in number at that time, and consequently a detailed report could be made of each separate school, a practice which for obvious reasons is impracticable at the present time.

Extracts from school reports of the 40's are herewith presented for the purpose of indicating to what extent details were reported in those days.

1. "This school was kept ten weeks in summer and eleven weeks in winter. The order of the school and deport-

ment of the scholars has been good during both terms. In summer the whole attendance was 47, average 23; in winter whole attendance 48, average 41. There are some good scholars in this district, but generally they seem to be satisfied with less education than most people would like to possess. The school house lacks almost entirely one of the most useful articles of assistance both to the teacher and scholar—a black board; the one which they possess being a miserable apology for that almost indispensable article in a school room."

2. "The school in this district continued eleven weeks in summer. The whole number of scholars 23, average attendance 17. A good teacher was employed and the school made good improvement. In winter the school was nine weeks long, whole attendance 26, average 22. The teacher needs experience and he ought to go to school another season before he again attempts to teach."

3. "A few large boys in this district make a great deal of trouble. A large portion of the people would be glad to have a good school, but when no particular exertion is made by such, a few families can destroy the usefulness of any school. There are a few families who are disposed to find fault when things are not done exactly to suit their notions of propriety. They know little or nothing about the manner of managing a school properly. There are men in this district who could cure the difficulty. As it is, the school money is thrown away to a great extent."

4. "The register indicates a large amount of absence. There are a few families who send their children to school, but very inconstantly. Such families are a 'dead weight' to a school; a source of trouble, vexation and discouragement to the teacher and scholars. There was a practice in this school of allowing the scholars to recite in concert, of which we cannot approve. We think the time might have been spent to better advantage in learning something useful."

The school report at the present day differs materially from the report of former years. It is prepared not merely for the inhabitants of the municipality. It sets forth in some form the

policy of the school boards of the respective towns or cities, and an exchange of reports with places in all parts of the Union is made, whereby each community derives benefit from the experience of others. A school report today is prepared as much for school boards and superintendents of other cities in this state and in the other states of the Union, as it is for the residents of the municipality in which the schools are maintained. The policy of the school department is set forth—information afforded which should be of interest to other communities, and helpful to many school officials who desire to avail themselves of the aid of those who have introduced and carried into effect plans for the betterment of schools.

Efforts are now being put forth in all sections of the Union to secure uniformity with reference to statistics that appear in the annual reports. Cost per pupil, for instance, is an item that is secured in one municipality by dividing the expense by the average attendance, while elsewhere the average number belonging, or the whole number, is taken for the divisor. The cost of the water used in the various buildings forms a part of the expenditures in some places, while elsewhere this expense is not charged to the school department.

Other items might be cited, but additional ones are not needed for the purpose of showing that figures presented at times are misleading, in an attempt to compare expenses or other matters annually reported.

The statistical part of the report which is herewith presented corresponds in substance with that which has been presented for several years past. It is expected that statistics in future reports will be presented in accordance with the standard forms prepared by the Census Bureau.

A school report thus becomes a document of considerable import. It was in former years prepared by certain members of the school board. It is now in most cases prepared by the Superintendent of Schools, under the direction of the Board.

The Fitchburg report this year contains reports or communications from principals of schools, heads of departments and supervisors of studies.

SCHOOL DISTRICTS.

It is not deemed inappropriate in connection with what has been said relative to school reports to direct special attention to the system that prevailed at the time many of these documents were sent forth. It must be understood that at the time the reports were written, from which these extracts are taken, the district system was in vogue.

The present generation has little idea of what is meant by the "District System," and for this reason some description thereof is herewith presented. There were twelve school districts in Fitchburg. Each district was practically a municipality by itself. The district elected annually one of its residents who served as prudential committee for the year. He employed a teacher for each term, whose compensation was limited by the amount of money the district appropriated for that year.

A teacher was paid a certain sum per week, and in addition thereto board was furnished. The length of the term depended in some measure upon the action of the district, relative to the board of the teacher. Each family represented at the school, in accordance with this plan, boarded the teacher for a time in proportion to the number of children in attendance, and thus the money that would be required to pay the board of the teacher could be used for his salary for the additional weeks.

The town elected a superintending school committee, whose duty it was to examine teachers who had been appointed by the prudential committee of the respective districts. This committee visited the schools, making reports of each one. The extracts above quoted indicate the character of the reports. The duties of the superintending school committee were merely advisory, the prudential committee in each district having practical control of the school therein.

It will be understood, from the reading of some of the extracts quoted, that there was a great deal of absenteeism, what in some cases would be called "truancy" at the present time. There was no law whereby attendance could be made compulsory.

A committeeman could direct attention to this evil, but no one had power to correct it. Other delinquencies were mentioned, and in these reports advice and suggestions of various

kinds were offered, and there the duty of this official ended. The town generally selected three, or some multiple of three, as members of the superintending school committee.

The abolishing of the old district system was the occasion of remarkable changes in school administration. The change from a district to a town system met with fierce opposition. The men and women of this generation have but a faint idea of the fierceness and bitterness of the strife. George H. Martin, in his work, "The Evolution of the Massachusetts Public School System," says: "It is one of the most remarkable sieges in history. The battle against the district system raged in every town."

Those who favored the retention of the district system were strenuous in their contention. They declared, to use the words of Mr. Martin,—"The town system was an entering wedge to centralization and despotism, and backwoods oratory in town meetings eloquently appealed to the memory of Patrick Henry, and the heroes of Lexington and Bunker Hill."

The legislature in 1859, at the Spring session, voted to abolish the district system, but at a special session in the Fall, the act of abolition was repealed. Four attempts were made to abolish the district system, three of which failed. Finally in 1882 the system was abolished.

The entire control of the school was thus placed in the hands of a board of school committee. This board, instead of being merely an advisory board, had the entire control of school affairs including the employing and the certificating of teachers, selecting of janitors and purchase of fuel for all schools. A few years ago, the city council of Fitchburg, took upon itself the hiring of janitors and the furnishing of fuel for the schools and in general the entire care of school buildings and grounds, leaving with the school board the management of the internal affairs of the schools.

A superintendent is now employed in most cities and towns and the preparation of the report is delegated to this official.

SCHOOL LEGISLATION.

School officials are on the watch each year to see what is required by reason of legislative action. Much of this legislation,—although of importance, and calculated to promote the

efficiency of the schools of the commonwealth,—is the result of the efforts of those who have no official connection with school management.

Changes in the requirements from year to year are likely to be so radical in character that careful study needs to be made of these matters in order that the letter and the spirit of the laws may be obeyed. Certain of these changes—some of them very important in character—relate to the employment of minors.

A law was enacted several years ago, by the legislature of this Commonwealth, that no minor between the ages of 16 and 21 could be employed in a factory while an evening school was in session unless he could read and write in English. The enforcement of the provisions of this act compelled a large number of young men and young women 18, 19 and 20 years of age to attend an evening school. One can well imagine what would be the result in large manufacturing places like Lowell and Fall River and even to a considerable extent in a place like Fitchburg. It is extremely doubtful if many superintendents of schools were aware of the existence of any such law until attention was called to it in the autumn. Evidently, it was not the work of school officials but it had its effect, in a wonderful measure, in many municipalities. Two years ago, in accordance with custom, the employers of minors in this city were notified that evening schools would be opened at a certain time and that after that date no person between 16 and 21 could be employed who was unable to read and write in English.

The information was then vouchsafed that the legislature that year had enacted a law whereby "minor" should mean a person under 18. That made a vast difference in the attendance for those between 18 and 21 were not oblige to attend. There is no disposition whatever to criticise, in any manner, the action of those who were instrumental in securing such legislation but it will be readily understood that school officials are expected to work in accordance with plans with whose inception they have nothing whatever to do.

Some surprise was manifested when it was reported that the legislature this year had enacted a law which provides that the term "minor" shall mean one who is under 21 years of age. Thus an illiterate who was 19 years old one year ago was not

obliged to attend an evening school, because he was not a minor. This year he is 20 years of age and being a minor the law compels his attendance. Thus is seen what influences are at work.

Employers of child labor in this city, with very few exceptions have at all times been ready to comply with all the requirements of legislative enactments pertaining to such matters. The difficulty in an attempt to comply strictly therewith must be very evident even to a casual observer.

Instances varying in character could be presented to illustrate this point. Here is one from actual every day life. The overseer in one of the rooms in a certain factory employs a number of minors. Applications for employment are made by those unable to speak English. A young man comes to the factory for employment. Some one who can speak English and can interpret for the one who seeks employment tells the overseer that the applicant for work is 21. The overseer sets him at work and in due time an inspector visits the factory and informs the overseer that said young man is but 19, that he should attend the evening school, and that his name should be upon the list of illiterate minors, that has been sent to the office of Superintendent of Schools.

The instance thus cited is but one of hundreds that could be presented.

Certificates of all kinds that are issued are furnished school authorities by the chief of the district police. School officials in every city and town are obliged by law to use the certificates thus provided, hence if any complaint or criticism is made relative to requirements, it must be understood that school officials are proceeding in accordance with the provisions of the laws of the Commonwealth.

The work required of school officials in the issuance of the various kinds of certificates is not understood by the public in general.

1. One form of certificates is for minors between 16 and 21 who are able to read and write in English. This certificate is required only while an evening school is in session. It is required by law, even if the minor be a college graduate.

2. A certificate of a different kind is required at all times for those between 16 and 21 who are unable to read and write in

English. Statutes relative to this class of minors read in part as follows: "No illiterate minor between the age of 16 and 21 years shall be employed in a factory, workshop, mechanical or mercantile establishment unless his employer procures and keeps on file, accessible to the truant officers of the city or town and to the district police and inspectors of factories and public buildings, a certificate showing that such minor is sixteen years of age or over. Said certificate shall give the place and date of birth of such minor and his personal description. The printed form of the certificate shall be provided by the chief of the district police and shall be approved by the attorney-general.

"An employer of minors in a factory, workshop or mercantile establishment shall keep on file and send to the Superintendent of Schools a complete list of the names of ALL minors employed who cannot read at sight and write legibly simple sentences in the English language."

3. No one under 14 can be employed at any time. Those between 14 and 16 must procure a certificate differing in form from either of the others that have been mentioned. The parent must make oath to the age and the birthplace of the child. The school physician must certify that the child is physically able to perform the work he intends to do. The employer must certify that he intends to employ said child whenever he presents a certificate from the office of the Superintendent of Schools. These certificates are issued in duplicate, one to be kept at the office of the School Superintendent and the other to be taken to the employer.

The responsibility in the entire matter is thus very properly placed upon the Superintendent of Schools. He and the persons duly authorized thereto by him are the only ones empowered to issue certificates of any kind.

Care needs to be exercised in the issuance of certificates, lest some be issued to those not entitled thereto. Applicants therefor may at times be put to some inconvenience, but this is unavoidable if honest effort is made to ascertain the exact facts.

The records at the office of the City Clerk furnish evidence relative to age of those born in the city. Statements are easily obtainable from city clerks or town clerks in other municipalities of the Commonwealth. Data of sufficient moment may be

obtained from school registers provided the minor has attended school for a number of years in this city.

Documentary evidence of some form is required of those who come from foreign lands. They are expected to produce a birth certificate, a baptismal certificate, a passport or a statement from the Immigration Commission of the port of entry. The applicant for the certificate is required in doubtful cases to send to a foreign land for a birth or a baptismal certificate. He is not allowed to work until he presents a certificate of some kind, unless he is able in some other manner to satisfy the certificating official relative to age. Failure to produce satisfactory evidence regarding these matters does at times prevent an applicant from receiving an employment certificate. An applicant therefor by reason of inability to receive such certificate has been known to leave this city for a place in which an employment certificate is more readily obtained.

PROMOTIONS AND CLASSIFICATION OF PUPILS.

No topic is of more interest in the educational world today than that of the advancement of pupils from grade to grade. The topic is a comprehensive one, including as it does the retardation of pupils,—the policy of examinations, the grading of schools and other factors whose influence is felt in any system of education.

Educational periodicals are debating these phases of the question, the press in general is proclaiming to the world that pupils are "held back" in such a manner that large numbers of them are unable to reach the high school or even the higher grades of the grammar school.

"Retardation of pupils" is a cry that is heard the length and breadth of the land. There certainly must be some reason for these criticisms or comments, although it needs to be borne in mind that whenever any adverse criticism of the schools is made no difficulty is made or experienced in securing a sufficient number of critics to venture opinions of various kinds.

The matter of promotion has not in this city been the occasion of uneasiness to any great extent and the reason assigned for directing attention thereto at this time is because

such undue prominence is given it in the press, from the platform and in meetings of teachers.

The rules of our school board provide for semi-annual promotions in all grades below the high school—promotion annually from the grammar schools to the high school. Practically promotions or transfer of pupils are made once a year, viz:—at the close of the school year in June.

Criticism of the schools is made on account of large numbers who are not sent along—those who are technically termed “hold overs.” It is not to be assumed merely because a pupil is kept more than one year in a grade that injustice is done said pupil, but whenever statistics show that in any grade there are many pupils one or two years older than the average of the class, the inference is plain that certain pupils are not receiving their just due.

There are twelve grades in the Fitchburg school system, viz:—four in the high school and eight below. Children enter grade one at six years of age. If they spend one year in a grade, they reach the high school at 14, graduating therefrom at 18. The curriculum should be so arranged that the ordinary pupil in good health with regular attendance can pass through the grades in the time mentioned. A few may be able to cover the ground in less time, but it is not well to “push these along.” A few are benefited by spending more time than is allotted. The great majority however, who enter at six, and whose physical condition permits them to attend regularly ought to be promoted or transferred regularly.

Various causes are assigned for the retardation of pupils if all such cases can be classed under that head. It certainly is a misuse of terms when it is said that a boy, 12 years of age, is held back or held over, or retarded, simply because he is in a first or a second grade, or is doing the work prescribed for one of those grades.

This boy comes from a foreign land—he has had no schooling in his own land—he does not speak English. Certainly as he enters school, if he is placed in a regular grade, it must be in the lowest one. If he can read a little, and knows a little of arithmetic, he can be placed in a third grade.

A boy comes from a country town in another state. He is 13 years of age. He has been at school a very little, he has

some little knowledge of arithmetic. He is fitted for grade three or four, where the pupils are eight or nine years of age.

Another boy, 12 years of age was born in this city. He has always lived here, he has been unable to attend school regularly. Poor health has compelled him to remain at home much of the time.

Other cases could be cited, but a duplication thereof would not serve to emphasize the phase of the question under consideration. Such instances are increasing year by year and thus the subject of promotion or the grading of classes become each year more and more important.

Careful study is given each year to this question with the view of ascertaining what plans may be best adapted to the needs of large numbers of pupils who, unless special plans are made operative, will reach the age of 14 or the compulsory age limit, before they are qualified to pass beyond the primary grade. It is not so much a question of promotion as it is of adapting the methods of instruction to the needs of large numbers of pupils that can in nowise be classified in any of the regular grades.

The great majority of pupils that enter grade one in September at the age of six are qualified one year hence to enter grade two. "There are exceptions to all rules," we are told and it would not be strange, if at the close of the year—the teacher should say that a very few would be benefited by remaining a while longer in the grade his companions are leaving. Should there be any considerable number of these exceptional cases it may be well assumed that a change at the teacher's desk is needed far more than any change in the system of promotion. What is said with reference to advancement from grades one or two, applies with equal force to advancement from any grade.

The term "repeater" ought not to imply injustice or ill treatment of any sort. An odium is attached to this term by reason of its use or misuse, as though the pupil to whom it is applied is guilty of some criminal offence. The teacher may decide—although the pupil has done his best—that it is well for him to repeat, and the fact that the teacher thus decides should not imply that the pupil is lacking in ability. Irregularity of

attendance occasioned by poor health or some other unavoidable condition has prevented him from keeping with the class.

Such cases are exceptionable and they must be treated as such, but we must not expect a large number of them.

An effort has been made in this city to make provision for those who from any cause whatever are likely to be "left over" in any grade. This number is increasing year by year. Pupils 8, 10, 12 or even 14 years of age are coming to us, who are unable to speak English. Others there are who from various causes are unable to work with any degree of success in any grade. Classes are organized for the purpose of affording opportunity for this class of pupils to pursue a course of study adapted to their particular needs.

Different plans have been adopted in different parts of the city since a plan or a device that is well adapted to one class does not produce the best results elsewhere. Neither does a plan whereby good results are obtained one term prove the most profitable one for the next term.

Details of certain plans adopted are herein set forth. A teacher is selected for a building, but she is not assigned to any grade. Pupils from several of the rooms are sent to this teacher, each of whom needs special drill in some special subject—it may be arithmetic or reading or geography. The teacher of the regular grade has not the time for dealing with individual pupils who need a greater amount of drill than can be given at the regular recitation hour.

A second plan is that of placing in one room pupils ranging in age from ten to fifteen—pupils whose attainments would not permit them to enter any grade but the lowest. Individual instruction is the rule in such a school.

A third plan of procedure is that of placing in one room, under the charge of one teacher, pupils of several different grades, 6, 7, 8 for instance. These can recite as a class but they need more drill than can be given in the regular class room. A pupil from grade six—one who is "over age" receives aid in this manner and in a short time is able to return to the regular grade six, or even to enter grade seven.

Other plans could be cited each of which is adopted for the purpose of aiding the individual pupil. Statements and statis-

tics are herewith presented by teachers who have had remarkably good success with their individual classes.

These three teachers whose reports are thus incorporated into this general report are deserving of high commendation for their patient and untiring efforts.

CLARENDON STREET UNGRADED SCHOOL.

MISS JEAN C. HORTON, Teacher.

"Fifty different pupils were enrolled during the year—20 of them coming from other schools in the building—five from other schools in the city. The others had not been enrolled in schools of Fitchburg.

"Twenty-seven at the time of entrance to this school were unable to speak English.

"Fifteen were transferred during the year to some regular graded school—16 left to go to work—19 remained until the close of the year.

"The oldest at the time of entering was 15, the youngest was eight.

"Nationalities as follows were represented at one time:—America, England, Scotland, Germany, Russia, Greece, France, Italy and Poland."

LAUREL STREET UNGRADED CLASSES.

MARY E. LUSCOMBE, Teacher.

September, 1910—June, 1911.

"Pupils from different grades—one to seven, inclusive—are sent to the room set apart for this special work. Individual aid is given in branches in which the respective pupils need aid. Each pupil is enrolled in some one of the regular grades, reciting with the regular classes in some subjects and going to the special teacher as occasion may require.

"The majority of these pupils were unable to speak English at the time of entering the school—although some of them were more or less proficient in their own language. They needed the aid that the regular teachers had not the time to

give. A little help in many instances enables the pupil in a few months to "make a grade," whereas otherwise he might be compelled to remain one or two years in one grade.

"Fourteen pupils received aid regularly in this manner during the year, twelve of whom had not attended school previously in this city. They entered at various times during the year. One was a "repeater" and one had been enrolled elsewhere in the city. Two were transferred to higher grades during the year and six others received what is termed a "double promotion" at the close of the year. One who had reached the compulsory age limit left school to go to work. Two were in school during the entire year. The youngest was six years, ten months old at the time of entering the school, the oldest was fifteen years, seven months.

"Besides the fourteen who were assisted regularly, 43 came from the various rooms from time to time and thus received assistance temporarily. The reasons assigned for need of help for these 43 were as follows: —

(a) Coming from school outside the city the attendance in many instances having been irregular, 6; (b) Coming from other schools in the city, previous change of schools in some instances having been quite frequent, 5; (c) Doing the work of two years in one, 13; (d) Special help needed in learning English, 1; (e) Mentally deficient, 1; (f) Slow in acquiring, 17."

ACADEMY STREET UNGRADED SCHOOL.

MRS. SALLIE A. CHAMPNEY,
Teacher from the organization thereof.

January 11, 1906, to the present time.

"The school was known at first, as "The Illiterate Minor School," but more recently as the Ungraded School for Non-English Speaking Pupils. At its organization only one English speaking pupil appeared, and very few of this class were enrolled during the first years of its history. The enrollment for a time was confined mainly to boys and girls from the mills. Now that it is unlawful for the manufacturers to employ

those under sixteen, who can not read or write our language, there are few from that source. Many nationalities have been represented. There has always been a large attendance, the ages ranging from eight to twenty-five years. During the fall and winter it has not been unusual to see a number of young men, from eighteen to twenty-five years of age, mostly Greeks and Armenians, who have sought in this way to learn to speak and write English.

"One not familiar with this kind of school, can hardly realize the obstacles confronting the teacher. Very few of the pupils being able to understand any general orders or questions, the teacher must literally give herself to the work; must impress each one with her interest in them, her desire to help them. One's enthusiasm must not diminish, nor her patience fail, while doing individual work almost wholly, yet keeping the other twenty-five or thirty employed. The diversity of ages makes the discipline far more difficult, yet generally speaking, there has never been a serious breach of discipline. The older ones especially are anxious to learn, and one sees better results, after the first few months, than among our English speaking pupils.

"The year beginning September 6, 1910, to June 30, 1911, was an average one.

"Nine nationalities were represented by 48 pupils, the youngest on entering being eight years of age, and the oldest 15. Of this number five came from other schools in the building, 12 from other schools in the city; 25 had never attended any school in this city, and six had been in this room the previous year. 33 were unable when entering to speak English. 13 remained the entire year, eight left to go to work, four to remain at home that the mother might work, five left the city, but are now attending school in various places, three left to enter a parochial school, 15 were promoted to a regular graded school in this city, and 13 entered this school in September, 1911."

The work of the special class at the high school is outlined in the report of the principal.

MEDICAL INSPECTION.

The law requiring medical inspection of the schools went into operation in 1906. The law provided that the Board of Health might take charge of such inspection, but in case this Board declined to assume authority, the School Board should appoint the inspectors. The Board of Health in this city declined to assume this authority, whereupon the School Board appointed two inspectors who served in that capacity until May, 1911. The Board of Health at that time notified the School Board that from and after that date the Board of Health would take charge of the work of inspection. This Board appointed one physician, Dr. F. H. Thompson, Jr., as medical inspector and school physician. He has reported during the year to the Board of Health and also to the School Board.

Extracts from his reports are herewith presented:

"In accordance with Chapter 514, of the Acts of 1909, the Medical Inspection of working children between the ages of 14 and 16, for Health Certificates was begun in August, 1910.

The report for the year August, 1910, to August 1, 1911, is as follows:

Number of minors examined,	333
Number of minors failed,	5

The number who failed, three girls and two boys, were refused certificates for the following reasons:

- (1) Dec. 19, 1910.—Diagnosis: Cachexia, Incipient pulmonary tuberculosis.
- (2) Dec. 30, 1910.—Diagnosis: Curvature of the spine.
Under treatment with apparatus.
- (3) Jan. 30, 1911.—Diagnosis: Epilepsy.
- (4) Feb. 24, 1911.—Diagnosis: Cachexia; Pulmonary tuberculosis. Has been under observation at the Tuberculosis Clinic.
- (5) July 24, 1911.—Diagnosis: Valvular heart disease.

The services of a district nurse are needed to follow up cases in the homes of children advised or excluded from school. By the co-operation of a nurse with the teachers and the School Physician it will be possible to shorten the exclusion period in many of the diseased due to lack of personal hygiene, and in other cases to hasten the time when the physical defects of the

child will be given proper medical attention and the defects remedied. The nurse will educate the parent on matters of common-sense hygiene, and thereby help to stamp out many of the prevailing parasitic skin diseases that are due to poor hygienic surroundings and which form a large percentage of absences from school."

Respectfully submitted,
FREDERICK H. THOMPSON, JR.,
School Physician.

Dec. 14, 1911.

CONCLUSION.

Special significance is attached to the reports hereunto appended which are made direct to the school department from heads of departments. Valuable information is contained in these documents.

Respectfully submitted,
JOSEPH G. EDGERLY,
Fitchburg, Dec. 22, 1911. *Superintendent.*



REPORT OF THE TRUANT OFFICER FOR THE SCHOOL YEAR 1910-11

Number of absentees reported and investigated between September 1, 1910 and June 30, 1911,	800
Divided among the different schools as follows :	
High School,	8
Central Grammar School,	26
Pleasant and Academy Street Schools,	115
School Street School,	6
Clarendon Street School,	83
Ashburnham Street School,	5
Laurel and Rollstone Street Schools,	30
Hosmer School,	31
Nolan School,	25
South Fitchburg School,	6
Maverick Street School,	3
Goodrich Street School,	55
Lunenburg Street School,	14
Day Street School,	68
Edgerly School,	31
Highland Avenue School,	5
Practical Arts School,	36
Pearl Hill School,	1
Wachusett School,	1
Woodbury School,	2
Immaculate Conception School,	34
St. Bernard School,	90
St. Francis School,	2
St. John School,	4
St. Joseph School,	119
Number found to be truants,	93
Number at Worcester County Training School, June 30, 1911,	1

Number of children in court for truancy,	2
Number sent to Worcester County Training School,	1
Number placed on probation,	1
Number of visits to schools, September 1, 1910, to June 30, 1911,	3,693
Number of visits to homes, September 1, 1910, to June 30, 1911,	636
Age and schooling certificates issued during the year to children between the ages of 14 and 16, males 206, females 209,	415
Age and schooling certificates signed by the mother,	291
By the father,	99
By guardian or custodian,	25
Number of mill and mercantile establishments visited,	30
Minors found working contrary to the provisions of Chapter 267, Section 28, revised laws of the Commonwealth of Massachusetts,	11
Birthplace of minors who received age and school- ing certificates for the year ending July 1, 1911,	
Fitchburg,	240
Massachusetts, outside of Fitchburg,	62
United States, outside of Massachusetts,	42
Canada,	47
Finland,	7
Italy,	7
England,	3
Russia,	3
Germany,	2
Greece,	1

WORK IN DETAIL.

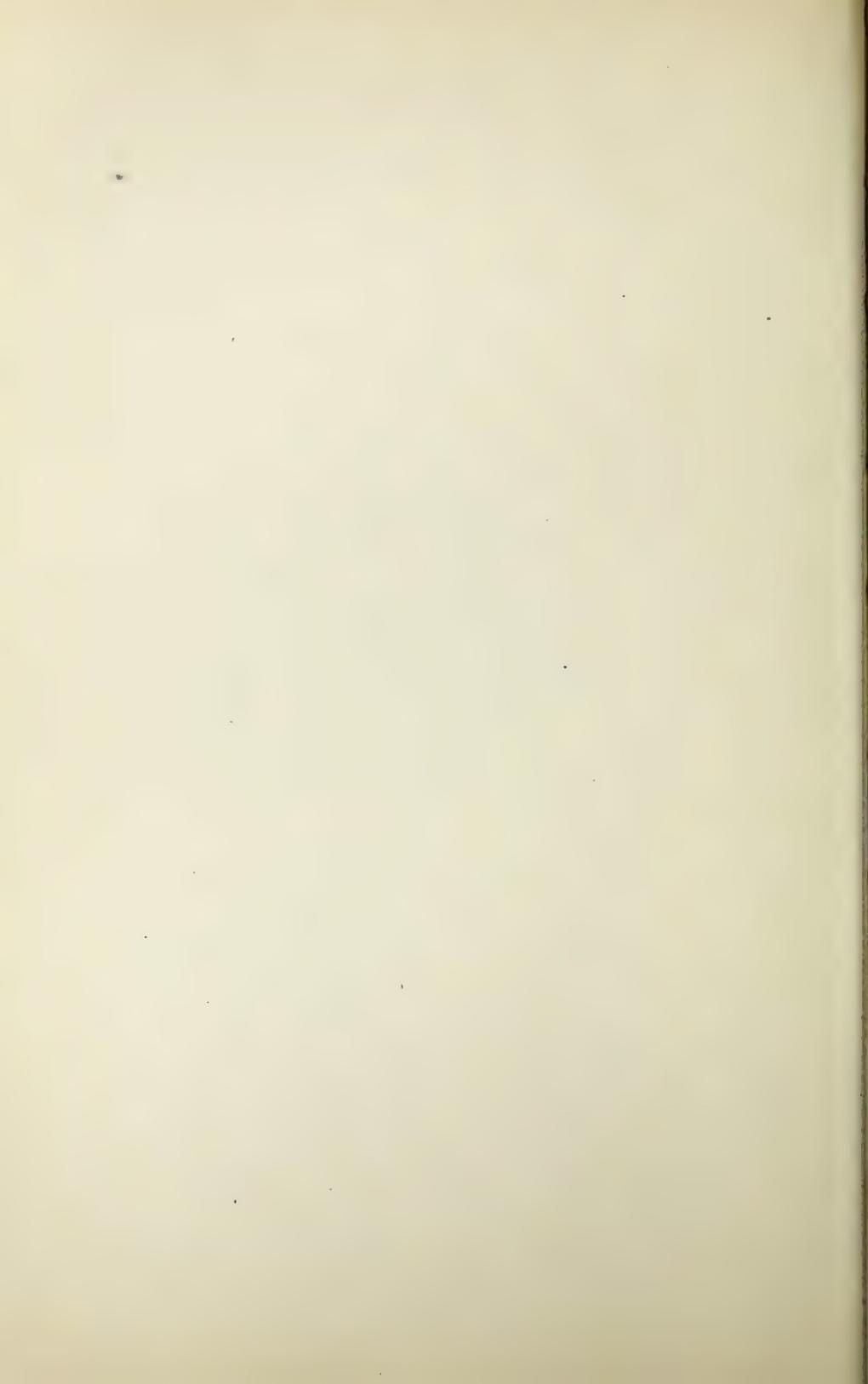
MONTHS	Case Investigated	Girls	Boys	Visits to Schools	Visits to Homes	Number found to be Truants	Illegal Employment of Minors
September,	66	16	50	420	56	12	3
October,	77	22	55	298	67	10	
November,	72	15	57	430	45	9	
December,	59	16	43	360	31	7	
January,	108	40	68	420	86	9	2
February,	62	20	42	288	51	3	
March,	121	32	89	396	89	10	
April,	82	20	62	416	68	13	2
May,	102	20	82	263	87	15	4
June,	51	11	40	402	56	5	
	800	212	588	3,693	636	93	11

Respectfully submitted,

NATHAN C. UPHAM,

Truant Officer.

June 30, 1911.



FITCHBURG HIGH SCHOOL.

As to the present condition of the High School the following facts are submitted:

	Sept. 19, 1911.	Sept. 16, 1902.
Number of pupils,	802	481
Number of teachers,	{ 31 all the time. 4 special.	25

One teacher to each 26 pupils in September, 1911.

One teacher to each 20 pupils in September, 1902.

STANDING AT THE COLLEGES.

The colleges which constitute the College Entrance Certificate Board are Amherst, Boston University, Bowdoin, Brown University, Dartmouth, Mount Holyoke, Smith, Tufts, University of Maine, University of Vermont, Wellesley, Wesleyan and Williams.

A quotation from our School Manual of recent date is as follows: "No certificates will be given to pupils whose work is such as to cause any doubt as to their ability to maintain themselves with credit in the first year of college work."

The renewal of the certificate privilege shows the standing of the school among those colleges.

(1) Certificate privilege was renewed by New England College Entrance Certificate Board for three years beginning Jan. 1, 1910.

(2) Certificate privilege has been renewed by Worcester Polytechnic Institute Jan. 1, 1910.

(3) Reports of students who have entered Harvard,
Massachusetts Institute of Technology,
Dartmouth,
Wellesley,
Vassar,
Smith,
Mt. Holyoke,

Wesleyan University,
Holy Cross,
Norwich University,
Rensselaer Institute,
Pratt Institute,
Simmons College,
Bryn Mawr.

Reports have been very gratifying, as the following letters may suggest :

First, from Secretary College Entrance Certificate Board ;
Second, from Worcester Polytechnic Institute ;
Third, from Dartmouth ;
Fourth, from Harvard.

159 BROWN ST., PROVIDENCE, R. I.,
May 13, 1910.

Principal of the High School,
Fitchburg, Mass.

Dear Sir: The High School in Fitchburg, Mass., has been approved by the New England College Entrance Certificate Board for three years, commencing January 1, 1910, subject to the following rule which has been adopted by the Board :

"The Board shall have the power of withdrawing approval from a school, and from such a school certificates shall not afterward be accepted until it shall again be approved by the Board."

NATHANIEL F. DAVIS,
Secretary.

WORCESTER, MASS., Jan. 31, 1910.

Mr. Charles T. Woodbury,
Principal Fitchburg High School,
Fitchburg, Mass.,

My Dear Mr. Woodbury: In connection with the renewal of the certificate privilege for another period of three years to the Fitchburg High School, I desire to take this opportunity of saying a word personally in connection with the students we receive from Fitchburg. I have now been connected with the Worcester Polytechnic Institute for nearly twenty years, and for something like ten years I have had charge of the work in

connection with all matters pertaining to the certification of high schools. For that reason, I have had occasion to come into somewhat intimate relation with the different high schools with whom that relation existed, and it has been a part of my duty to check up the records of students who entered on certificate, and to note any cases in which students did not make good in those subjects which depended directly on the subjects in which they were certified. It gives me a great deal of pleasure to say that the record which has been made with us by the Fitchburg High School is one of exceptional excellence. I do not recall a single case in which the Fitchburg certificate was not amply justified by the student's subsequent record; and in many cases the students have made records of much more than ordinarily good standing.

Hoping for a continuance in future of the cordial relations that have so long existed between the Worcester Polytechnic Institute and the Fitchburg High School, I am

Very sincerely yours,

(Signed) LEVI L. CONANT,

Chairman of the Committee on Certification of Preparatory Schools.

DEAN'S OFFICE, DARTMOUTH COLLEGE,
HANOVER, N. H., April 20, 1908.

Principal Charles T. Woodbury,
High School, Fitchburg, Mass.

My Dear Mr. Woodbury: I have your letter, received while I was away upon a two weeks' vacation, asking about the young men who fitted at your school. I am glad to report to you that every one of your former pupils have met our requirements both during the first year of the college course and since. You did not ask for the standing of A, who entered in the class of 1908. B ranked over 80 per cent the first semester of the Freshman year; C over 60 per cent; A over 80 per cent; and they have maintained about the same standing, doing a little better, throughout the course. All these men entered by certificate. D had a rank of a little over 80 per cent the first semester, and E ranked nearly 85 per cent the first semester, and they are both doing well. F of our Freshman class had a rank of 79.4, and G ranked a little over 60 per cent. C and G are not of high grade in scholarship, still they show that they

were well prepared according to their ability. From this showing you may feel well satisfied with the work of your school in preparation for college.

Very truly yours,

CHARLES F. EMERSON.

HARVARD UNIVERSITY, CAMBRIDGE, MASS.,
March 23, 1911.

My dear Mr. Woodbury:

I take pleasure in sending you, in accordance with your request of March 22, copies of the records of Fitchburg boys who took examinations in 1910.

I should call A's record distinctly a good one. I think also that the records of B, C and D are good records. I should call them better than the average records for admission. Your last question I regret to say is one that I cannot answer. I think it would be impossible to make any comparative statement as to the records presented five, ten or fifteen years ago with those of today except, perhaps, that the boys who came up in 1906 from Fitchburg seem to be a rather poor lot. Since that time, they have been decidedly better.

Very truly yours,

J. G. HART.

STANDING OF 1910 GRADUATES IN THE COLLEGES OR TECHNICAL SCHOOLS.

College Course—Of 9 graduates—six entered college; two by certificate, four by examination.

The two who entered college on certificate are doing excellent work in some subjects, and passing in all subjects, according to reports from Dartmouth and Holy Cross.

The four who entered college by examination are all doing creditably and passing work in their courses, except that one of the four has failed in one of seven courses.

Technology Preparatory Course—Of six graduates all entered technical schools; three on certificate, one on diploma, two by examination. All are doing excellent work, according to their records at Wesleyan, at Massachusetts Institute of

Technology, Worcester Polytechnic Institute and Rensselaer Institute.

Of the General Course pupils, those at Norwich University and Pratt Institute are making excellent records. There are eighteen at the Fitchburg Normal School, two at the Boston Normal Art School.

Of those at the Fitchburg Normal School the principal states that the general impression of the teachers is that the preparation was satisfactory and that the eighteen graduates of the school, class of 1910, are doing good work.

Of the Commercial and General Course pupils our graduates have positions as bookkeepers or stenographers in the offices of Fitchburg Machine Co., Franklin Freeman's office at Leominster, Smiley's, Miner & Payson, Fitchburg Gas and Electric Light Co., G. M. Parks Co., Lowe Bros., Simonds Manufacturing Co., Brown Bag Filling Machine Co., Gruener Hardware Co., Perley R. Eaton's office, New England Manufacturing Co., Fitchburg Hardware Co., Dillon's, DeJonge's, East Yard Car Shops, Nichols & Frost, Jennison Plumbing Co., Sentinel Office, Fitchburg Mutual Fire Insurance Co.

Our Commercial and Part Commercial Course graduates since 1903 are also in the offices of Parkhill Manufacturing Co., Fitchburg National Bank, Fitchburg Safe Deposit & Trust Co., and Shirreffs Mill.

In the Fitchburg Gas and Electric Light Co.'s office there are five graduates of the following classes: one from 1903, two from 1907, one from 1909, one from 1910. And the testimony of the gentleman in charge of the office is that these young men and women are very efficient. One of these young persons, now hardly 21, who graduated four years ago, is earning \$18 per week in that office. I might add that as a pupil his record at school, in deportment, scholarship, and punctuality was excellent.

These young men and women twenty-five in number from the class of 1910 are earning from \$5 to \$10 per week.

This class of 1910, ninety-eight in number, has made a good beginning since the commencement of 1910.

In the hazy future
When the storm waves roll,
And dark failure threatens
To engulf the soul,
Then shall we remember
Through our hopes and fears,
Hours with thee, O Mater,
In those cherished years—
When ambitions high as heav'n
Call'd the class of nineteen eleven.

VALEDICTORY

President Paul Glenn Kent, 1911

MARCH

Orchestra

The class of 1911 at graduation enrolled the largest number in the history of the school, divided as follows:

Twelve in the College Course.

Six in the Technology Preparatory Course.

Fifty-four in the General Course.

Nineteen in the Commercial Course.

Twenty in the Cooperative Industrial Course.

Of these one was admitted to Trinity College, Washington, five were admitted to Harvard, only one of the five with any conditions, one entered Worcester Polytechnic Institute, one Annapolis Naval Academy, one Boston University, one University of Illinois, one Ohio Northern University.

Ten are taking courses at the school this year, and plan to enter Dartmouth, Worcester Polytechnic Institute, Simmons, Wesleyan, Amherst State, Wellesley and Massachusetts Institute of Technology, next September.

One is studying music in Germany, one is enrolled in the Walnut Hills School, and one is teaching in Bennett College, Greensboro, N. C.

Twenty-four were admitted to the Fitchburg Normal School. Two entered the Boston Normal Art School.

Twenty-one of the commercial and general course pupils, who took some commercial subjects, are now employed in some

of the best business offices of the city at wages from \$4 to \$12 per week. These offices include Webber Lumber Co., Daily News office, Bickford's Hack and Carriage Co., Crocker, Burbank & Co., Cornforth & Marx Silk Mill, C. H. Greene, Wm. A. Hardy & Sons, Brass Founders, H. M. Downs Printing Co., Whittemore Box Co., Keith Bill Posting Co., C. A. Edgerton Co., Shirley, Boston & Maine Car Shops, H. A. Hatch & Son, Iver Johnson Co.

Nine boys who pursued college, technical or general course are at work in mills, offices and stores of this city.

Of the twenty co-operative industrial graduates, fourteen are now working in the same shops in which they have worked in the last three years and are receiving from \$12 to \$15 per week ; one has entered a university, one is in a business school, one is employed in a machine shop in Worcester.

Testimony to the worth of the industrial course is seen from the fact that eight of these young men have been, since September, taking evening courses in French and mathematics with the intention, on the part of a number, of better preparing themselves for some technical school.

HIGH SCHOOL SPECIAL CLASS.

Since 1907 there has been a special class at the high school under the same teacher, for pupils not ready for the high school and for whom repeating in the grammar school did not meet their needs.

In September, 1907, there were 26 pupils in this special class. There the general plan of the work for the year was to take English, history, arithmetic and algebra, under this special teacher, and in addition to this the boys were to have manual training and mechanical drawing, while the girls have four periods a week of sewing and dressmaking, two of cooking and four of drawing and designing. At the end of this year of special work 14 of the 26 entered the freshman class of the high school ; in September, 1908, two entered business college ; in September, 1909, three were promoted to the sophomore class conditionally, and four repeated ; in September, 1910, three of this class entered the junior class. In September, of 1908, 26

pupils entered the special class and pursued similar work to that of the pupils who entered the class in 1907. In September, 1909, of these 26, nine entered the freshman class; in September, 1910, one entered the junior class, four entered the sophomore class, and two remained in the freshman class; in September, 1911, one boy entered the senior Industrial Course, three the junior class and two the sophomore class. In September, 1909, there were 28 pupils in this special course; in 1910, twelve of these entered the freshman class, one entered business school; in September, 1911, two of these entered the sophomore class; in September, 1911, nine entered the freshman class. In September, 1911, there were 18 pupils in this special class, and up to the present none have left school.

By this special work the pupils have been able to come in touch with the high school work, have taken part in some of the regular high school exercises, like singing, and have continued in high school one, two, and a few have remained four years, whereas if it had not been for this special class probably not a single one of these pupils would have entered high school.

A comparison of records for entrance to college during three four year periods is of interest :

	1886	1887	1888	1889
Boston University,	2			1
Harvard,	1	1		
Wesleyan,	1			
Holy Cross,	1			
Brown,		1		
Yale,		1		
Amherst,		1	1	
Wellesley,		1	1	

The above data was given by members of classes or by teachers of the school at that time.

A quotation from Principal G. P. Hitchcock's report, "Fitchburg High School and the Colleges," follows:

"The equipment of our high school is such that it can compete successfully with the best preparatory schools. Our pupils frequently enter college with credit and make brilliant records for scholarship during their course. Oftentimes they

are permitted to take courses as freshmen which are usually open only to upper classmen, owing to the amount of work they have done in our school.

"The best preparatory schools, however, cannot guarantee that their pupils will enter college without conditions, or, indeed, that they will enter at all. The burden of the responsibility rests with the individual pupil. The chief requisites are health, ability which is at least average, and a close application to every day's work. Without these requisites failure to enter college without conditions is practically certain."

That our high school has been able to meet these requirements the accompanying figures show:

Institute	1896	1897	1898	1899	Totals
Amherst College,		1		2	3
Boston University,	1		1		2
Brown University,	1	1	5	2	9
Cornell University,	1				1
Dartmouth College,		1	1		2
Harvard College,	2			2	4
Massachusetts Institute of Technology,	1	3	1	1	6
Mount Holyoke College,		2		1	3
Radcliffe College,				1	1
Tufts College,	1	1		2	4
Smith College,	1	9		6	16
Wellesley College,			1	2	3
Wells College,	1	1			2
Worcester Polytechnic Institute,	3	1	6		10
Rensselaer Polytechnic Institute,				2	2
	—	—	—	—	—
Totals,	12	21	15	20	68

The statements made by Mr. Hitchcock apply as well today as ten years ago. Work must be thoroughly and honestly done in order that college work may be satisfactorily met. Pupils who use translations or keys to enable them to pass high school courses will not earn the certificate privilege and will probably fail in entrance examinations. It is not seldom that a high school is blamed when a pupil has to give up school, broken down by overwork, where the actual causes probably

are, too little systematic physical exercise in the open air, too late hours and too much social dissipation.

The third table shows us the more recent years :

	1906	1907	1908	1909	Totals
Boston University,	1				1
Wellesley,	2	2	2	1	7
Dartmouth,	3	1	2		6
Harvard,	4	1	3	2	10
Worcester Polytechnic,	3	4	1	2	10
University of Vermont,	1				1
Lowell Textile,	2		1	3	6
Holy Cross,		2	1	2	5
Smith,		1		3	4
Pratt Institute,				2	2
Massachusetts Institute of Technology,		1	2	1	4
Union College,	1				1
Norwich University,				2	2
Brown University,	2	2			4
Tufts,			1		1
Radcliffe,			1		1
Clark,			1		1
West Point,			1		1
Mt. Holyoke,			1		1
Simmons,			1		1
Columbia,				1	1
 Totals,	 —	 —	 —	 —	 —
	16	15	20	19	70

These tables show the following facts—that no comparison can be made between the college record of ten years ago and that of twenty years ago, and between the recent college record with that of twenty years ago, both on account of the small size of the school twenty years ago and the small number who entered college at that time. It is true that though the classes from 1886 to 1889 were small, numbering from twenty to thirty-one, there are strong teachers and business men from among them in this city and in other places, two of the most progressive and efficient educators in Massachusetts.

The comparison of the table of recent date with that of ten years ago shows that while 68 entered college or technical

school during the earlier period, 70 entered during the later period—the later pupils entering the more practical schools in larger numbers. During the recent period the school has fully maintained its earlier position as a college preparatory school and at the same time has met the needs of other pupils by providing an up-to-date commercial course which graduated its first pupils in 1908, and a co-operative industrial course which will graduate its first class in 1911. This last course has been a great improvement on the old manual training course, which was given up in 1908, as we did not have accommodations and equipment to properly carry it on.

I might give illustration after illustration to show excellence of college record of Fitchburg high school graduates since the present administration began in 1903—a few may suffice. One graduate of 1904 studied here another year, entered Trinity College at Hartford, was valedictorian of his class; another of the same class made an exceptional record at McGill University and graduates from the McGill Law School in June of this year. A third with first-class record at Smith is now a teacher at the Brattleboro high school. A fourth graduated with high rank at Amherst, took examination at Washington and is now in the diplomatic service in China. A fifth, an honor student in biology at Dartmouth, took the New York teachers' examinations the second year after graduation and passed with highest mark against a large field of competitors, and is now teaching biology in one of the largest schools of the city—a school of over 3,000 boys.

From 1905 there is a member of our faculty, another well-known as a superior singer, a third, probably the best magazine illustrator ever graduated from the school, a fourth, after making an excellent record at Brown, is now in business in this city.

From 1906 there were graduates of the colleges in 1910 who were very successful in their undergraduate work and have just started on a business career or their professional studies.

Of 1907, there were rare leaders of their fellows while in the high school, one of whom is now president of his college class, a successful student and athlete, and another is now studying for the priesthood.

Of 1908 members at Wellesley and Radcliffe, whose records here were A, are making similar records there.

The class of 1909 had members of large ability and promise, one of whom at Wellesley and others at Harvard are fulfilling that promise.

A member of the class of 1910 for two years, 1908 to 1910, now Bryn Mawr 1914, a young woman of exceptional ability, made a most unusual record during the first year at that institution. The record of all the members of the class of 1910 who made a fair record at school, C or above, is very gratifying to their teachers. I would here state that the probabilities are that a student, who does not maintain a record of B in most of his studies, with a record never below C in any, will find difficulty in maintaining a satisfactory record after entering upon college work.

I would further call the attention of parents to the five-year course and suggest that a well-planned course of five years, in which proper attention is paid to physical culture, will produce an all-round development, which will enable the boy or girl of 19 to enter college better ready for the stress and strain of college life.

Time fails me and your patience forbids going into detail in recording the successes of the large number of pupils who have entered the normal school since 1903—about 125 in number,—of the appreciative words that have come to us from some of the business men of the city who have employed our commercial graduates.

The business men of the city have given the heartiest co-operation to the school; the High School Committee, Superintendent and Principal have responded with equal heartiness. The result is that the young men of the Industrial Course are learning a trade, getting at the causes of things at school, coming in touch with the stimulating atmosphere of school and shop alternately, and, according to Mr. W. B. Hunter, earned something like \$23,000 by July 1, 1911. Further arrangements have been made so that a boy who wishes to learn the cotton manufacturing business may go into the Parkhill mill one week and come to school the next. There is not another high school

in Massachusetts which offers a boy desirous of learning a trade opportunities similar to those offered by our half-time Industrial Courses.

FACULTY OF THE SCHOOL.

The following statement shows the great number of changes that have been made in the teaching force during the last few years, and when the committee and citizens consider the changes during the year the showing of the school as stated above should be considered most satisfactory.

1903-1904—A new principal and one new teacher.

1904-1905—Six new teachers.

1905-1906—Three new teachers.

1906-1907—Eleven new teachers.

1907-1908—Seven new teachers.

1908-1909—Five new teachers.

1909-1910—Six new teachers.

1910-1911—Nine new teachers.

1911-1912—Three new teachers.

Of the teachers who have severed their connection with the school during this period, mention should be made of the unusually efficient and untiring service of Mr. E. Adams Hartwell and Mr. A. Eugene Nolen who taught in the high school for long periods; the former 32 years, the latter for 23 years.

At present there are five teachers in the faculty who were teaching here in 1901. I believe that in character, natural ability and attainment, this faculty deserves the heartiest confidence of the community. The teachers desire to co-operate with parents and pupils to the end that true men and women may be developed during this important period of adolescence.

MOST IMPORTANT EVENTS AND CHANGES OF THE LAST EIGHT YEARS.

1903—School prize speaking begun and continued until the present.

1903—First issue of school paper, "Red and Gray," a carefully edited and prepared paper.

1904—School song adopted. Constitution adopted for Athletic Association.

1905—Debating Club formed—continued.

1906—A teacher of elocution chosen to give one day a week to Junior class.

1907—School Council formed; a representative body of one from each room, with Senior and Junior class officers, to assist in managing the school and creating a spirit of responsibility and loyalty to the school.

1907—Interscholastic prize speaking begun. Four schools have competed and each school has been represented by two speakers. Fitchburg High won a first prize in 1907, 1908 and 1910, and a second prize in 1909 and 1910.

1907—Library instruction begun by librarian. This instruction is given in few high schools in Massachusetts.

1908—Industrial Course begun.

1910—Special afternoon work for pupils who would not study at home, and a special class formed for pupils delaying their classes.

1910—A teacher of physical culture secured for Freshman girls.

1910—Beginning of co-operative work with the banks and business houses for commercial students.

ATHLETICS.

A constitution was adopted in 1903, the object of which was to have athletics properly managed. An attempt has been made to have candidates for teams train properly, maintain at least a passing record in their studies, and have a good deportment record. Since November, 1898, no post-graduate has represented the school on any of its athletic teams.

In 1908 the Wachusett Interscholastic League was organized under the direction of the Fitchburg High school.

A quotation from the Sentinel of March 22 may be of interest.

"Malden High school has 68 candidates for its base-ball team. School spirit is the whole thing at Malden. It is a safe bet that there will not be 68 or more candidates for the team in this city."

It may be well to note that at Malden, where there is so much interest in athletics, that there is a physical director, a member of the faculty, who receives \$1,200 a year and takes charge of athletics and during the winter and spring gives instruction in gymnastics. I suggest that as the Park Commission are very willing to cooperate with the School Committee in engaging a municipal physical and playground director that the School Committee accept the opportunity. I believe that such a step would be of great benefit to the future citizens of Fitchburg and would place us on a level with other progressive communities.

The old Greek and Roman idea was a sound mind in a sound body. The Greeks, especially, by their training developed beautiful and strong bodies. In the middle ages the young knight was taught to swim, to ride, to shoot, and to develop his body to the highest point. In our day more systematic training should be given, that children who are confined so many hours in school rooms may learn the important facts of value of the body, its proper care and development, and actually do things under competent direction. My opinion is that a physical director on the high school force is of equal, if not more, importance than any other teacher.

Since writing the last sentence my attention has been called to the words of Mrs. Ella Flagg Young, Superintendent of Schools of Chicago and recently President of the National Educational Association :

"We have come to believe," said Mrs. Young, "that it is more important to build the body of the youth until it reaches as near physical perfection as possible than it is to devote so much time toward development in mental attainments."

In discussing the needs of our school with Mr. William Orr, Deputy Commissioner of Education of Massachusetts, he

made the statement that the athletics of the school would never be satisfactory until we had a physical instructor.

ATHLETIC RECORD.

	Football	Base Ball	Track	Basket Ball
1901-02	3 won 3 lost	5 won 3 lost	No meet	
1902-03	5 lost 1 won 1 tie	5 won 5 lost	(1) Fitchburg	6 won 7 lost
1903-04	4 won 5 lost 1 tie	4 won 5 lost	No meet	13 won 1 lost
1904-05	6 won 2 lost	6 won 6 lost	No meet	7 won 9 lost
1905-06	2 won 8 lost 1 tie	7 won 4 lost	No meet	10 won 3 lost
1906-07	6 won 2 lost 1 tie	3 won 6 lost	No meet	11 won 6 lost
1907-08	6 won 2 lost 1 tie	4 won 6 lost 1 tie	(1) Fitchburg	9 won 8 lost
1908-09	5 won 5 lost 1 tie	4 won 6 lost	(1) Fitchburg	10 won 7 lost
1909-10	2 won 3 lost 1 tie	6 won 3 lost	(1) Clinton	14 won 4 lost
1910-11	5 won 3 lost 1 tie	6 won 5 lost	(1) Leominster	9 won 4 lost
1911-12	2 won 6 lost 1 tie			

The purpose of the present administration has not been to have it popular with everybody. The purpose has been to have an honest, just and efficient administration, which the graduate of five or ten years might look back upon and feel was right, if he couldn't quite appreciate the purpose at the time he was in school. The attempt has been to manage the school for the benefit of the pupils and to train them in habits of right thinking and doing.

Respectfully submitted,
CHARLES T. WOODBURY.

December 1, 1911.

PRACTICAL ARTS SCHOOL

The Practical Arts School is now fully established with a membership as large as is possible in the present building. At the end of the second year the school had outgrown the present building and, in order to give seating room for pupils, some of the work was removed to the attic of the building and to one class room and the attic of the Edgerly School. Both the Practical Arts School and the Edgerly School are so framed that the attics will make excellent shops when they are heated and lighted. An appropriation for this purpose is asked for from the legislature of 1912.

The school offers the following four courses for grades seven and eight.

COMMERCIAL COURSE, 30 hours per week.

12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history and science.

7½ hours to physical training, social dancing, music, general exercises and recesses.

Ten hours to typewriting, shorthand, bookkeeping and business arithmetic and related design.

PRACTICAL ARTS COURSE, 30 hours per week.

12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history and science.

7½ hours to physical training, social dancing, music, general exercises and recesses.

Ten hours to drawing, designing, printing, making and repairing.

HOUSEHOLD ARTS COURSE, 30 hours per week.

12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history and science.

7½ hours to physical training, social dancing, music, general exercises and recesses.

10 hours to household arts.

LITERARY COURSE, 30 hours per week.

12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history and science.

7½ hours to physical training, social dancing, music, general exercises and recesses.

5 hours to a modern language.

5 hours to drawing, designing, printing, making and re-pairing. (Household Arts for girls).

Home study is also required—two hours a week in grade seven and five hours a week in grade eight.

This home study it is expected will gradually develop the habit of doing part of the school preparation outside of school hours and make the pupil better able to meet the high school requirements of fifteen hours home study per week. It may seem to some that with thirty hours of school sessions per week there should be no required home work. If there be any holding such an opinion they should not forget the amount of time in each course given to manual work, and the total hours of study and recitation required of first year high school pupils. One of the causes of failure in taking up high school work is the jump from the ordinary eighth grade requirement of twenty-five hours per week to the high school requirement of forty hours per week. As arranged at the Practical Arts School the transition is easier.

Seventh Grade—32 hours per week including 5 to 10 hours manual work.

Eighth Grade—35 hours per week, including 5 to 10 hours manual work.

High School—40 hours per week.

It will be necessary hereafter to set a limit to the number of pupils who can be admitted to each of the courses. Next September (1912) the numbers which the school can accommodate will be as follows:

Literary, 64; Commercial, 64; Practical Arts, 64; Household Arts, 64; a total of 256 in grades seven and eight.

Pupils attending Day street school and the Edgerly school should be given the first opportunity; after which the courses, until the number limit is reached should be open to all pupils in the city who have completed the sixth grade work. Such

pupils should be received in order of application, which should be made through the office of the superintendent of schools.

The work of the school has been broadened and strengthened by the purchase by the state of nearly ten acres of land which will provide ample opportunity for agricultural work and for athletics. Beginning next spring it is planned to give the boys attending the school an opportunity to earn something by working Saturdays and vacations upon the land.

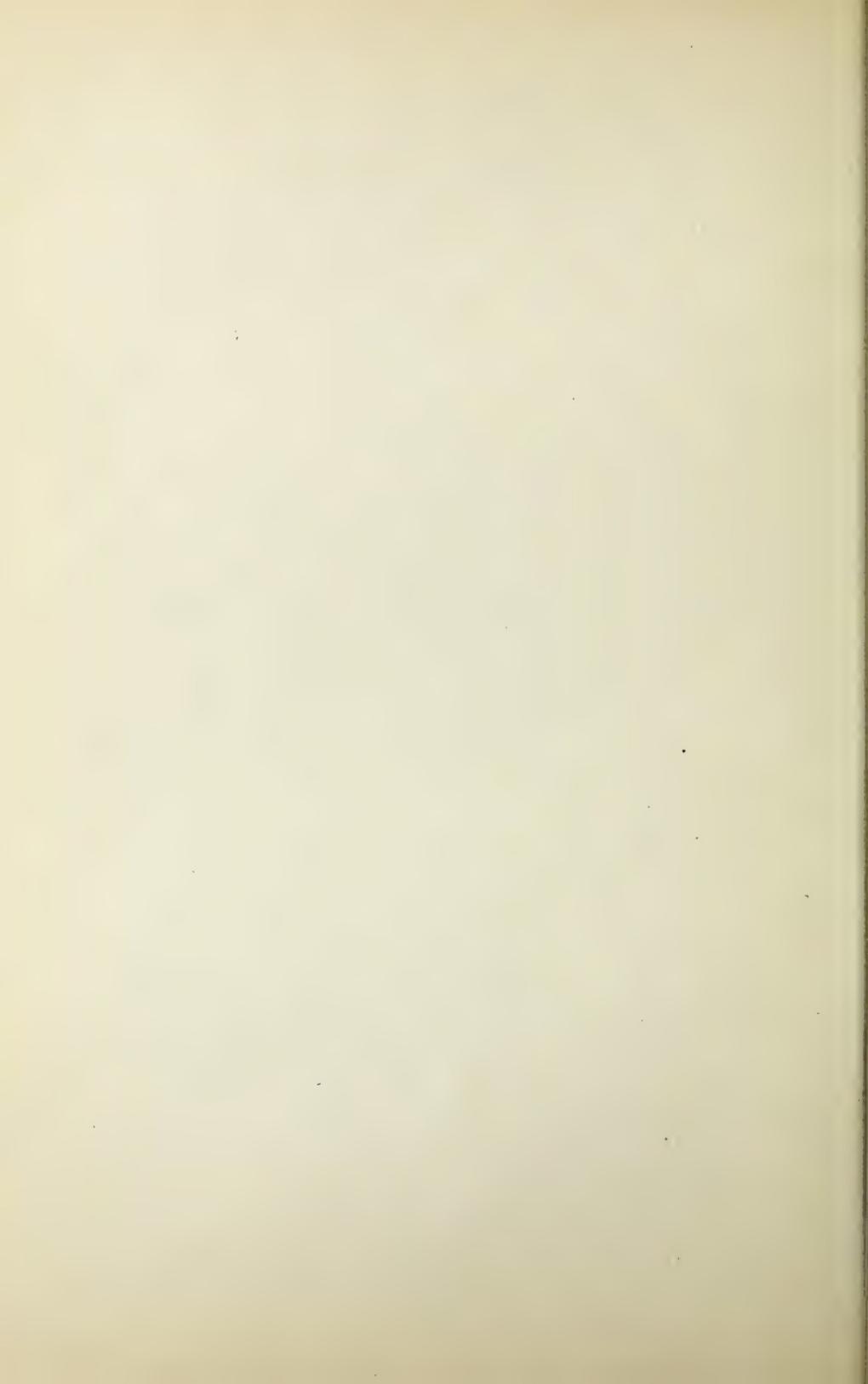
The school it is hoped is meeting better each year the purposes for which it was established ; to make the book work of the elementary school real and therefore significant ; to impress the pupil consciously and unconsciously with the truth that the world is a world of work even more largely than a world of books ; and to teach him that hard manual labor is dignified and worthy and one of the greatest of men's blessings—the basis of sound health, cheerful spirits and good morals. Incidentally, the literary work is improved as its use and value is understood. The pupil is also brought into contact with several trades and is thus enabled to make an intelligent choice of a vocation, when such a choice is to be made.

The growing appreciation of the aims and the work of the school not only in Fitchburg but in other parts of the country is gratifying to those who have given so freely of their thought and time to its development. Peculiarly pleasing was the declaration of the Chairman of the Canadian Commission on Industrial Education that some such course as the practical arts course should precede and be a preparation for trade or vocational courses—and of other members of the Commission that the school was one of the most suggestive, interesting and helpful contributions to the solution of the present educational problem that they had found in their sixteen months of travel in Europe and the United States. They found but one similar school, an elementary Practical Arts School, recently opened in Leeds, England.

Respectfully submitted,

CHARLES S. ALEXANDER, *Director.*

December 11, 1911.



DOMESTIC SCIENCE DEPARTMENT

Domestic science was introduced into the public schools of Fitchburg September, 1904, upon the suggestion of Professor Calvin M. Woodard, and a generous donation was made by Mrs. Minerva C. Crocker for the purpose of equipping a domestic science laboratory.

A room in the Academy Street school building was chosen, on account of its situation, because it had been decided to give the girls of the Central grammar school and the first year of the high school the advantage of this department. When the building was remodeled in 1908 the laboratory was placed on the second floor and another room was then added. This present year one-half of this room has been converted into a model bed room and the other half into a dining room; the carpenter work being done by the boys of the manual training department; the curtains and linen for the bed room and dining room made by the girls pursuing the sewing course in the high school.

These rooms have been equipped for the purpose of giving the pupils work in household arts and the proper arrangement of the table and serving of menus.

At first the kitchen was equipped with table space for 16 girls, but this year it was necessary to add another table in order to accommodate classes of 20.

This year several changes have been occasioned in this department on account of the discontinuance of the Central grammar school and the introduction of cooking into the seventh grade. It was necessary to make such arrangements for transportation of each class that as little time as possible would be taken from the regular school work. It was finally arranged to give the pupils coming from schools farthest from the laboratory their lessons in the afternoon, and those nearest their lessons in the morning.

At present the pupils of the seventh and the eighth grades and the first year of the high school may take advantage of this department. This gives a three years' course to those who complete this work.

The present schedule gives an attendance of 126 girls from the seventh grades, 135 girls from the eighth grades, 30 girls from the high school. Making a total enrollment of 291 as compared with 175 of last year.

In order to accommodate all the pupils enrolled it was necessary to alternate the seventh grades, giving them a lesson but once in two weeks.

The regular course consists of a period of an hour and one half each week. In the seventh grades the work is of an elementary nature and gives a general foundation for the more advanced work taken in the eighth grade and the high school classes. At each lesson the pupils are given printed recipes of the dishes prepared that day. These sheets are kept in book form so that each girl has a book of reliable recipes at the completion of the course.

There are three classes in session each day at the laboratory. First class reports at 8.30 and is dismissed at 10 o'clock, second class 10.30 to 12, and the afternoon class from 2.15 to 3.45. The first class is due to report to their grade teacher at recess, at which time the second class leaves that school building. The afternoon classes do not report to their grade teacher the afternoon they have cooking, but the attendance is reported each week.

Absences are very infrequent, although at the beginning of the term it was thought that the pupils of the more distant schools would not attend the classes in cookery on account of the expense of transportation. Nevertheless all the girls of the seventh and the eighth grades are enrolled in this department.

The pupils, while cooking, wear a uniform consisting of an apron, cap, sleeves, holder and hand towel. When the department was established the pupils were obliged to carry their uniforms home each week, but three years ago lockers were supplied by the city.

It was purposed to have the uniforms made in the sewing classes but this proved to be more work than could be accomplished in the scheduled time for sewing, but this year sewing

machines have been placed in the schools, so that now the pupils of the sixth grades will make their uniforms and have them ready to wear when they enter the domestic science department from the seventh grades.

The aim of this department is --

I. To give the pupils an understanding of the composition and food value of the most important foods, and to teach the best method of preparation in order to make them nutritious as well as palatable and digestible.

II. To teach the necessity of cleanliness not only in regard to the household and its equipment but also food materials and personal habits.

III. To teach the pupils to work with food stuffs and utensils, and to feel responsible for the results of their work.

In a cooking lesson the subject is developed by first giving the theory, then its application by the preparation of one or more illustrative dishes, serving, washing of dishes and leaving the kitchen in proper order. This is followed by a review and summary of the day's lesson.

The work of the pupils has been before the public at different times in exhibition work, giving those interested an opportunity to observe and to judge the results of the pupils' work at school.

A few years ago the pupils served a dinner to our superintendent and the committee of this department. The purpose of this dinner was to demonstrate, to those in charge, the results of this department and to give the pupils the experience of properly serving a dinner of several courses.

On Dec. 2, 1910, the girls of one of the high school classes served a luncheon to the supervisors of drawing of this district.

This department attracts many visitors, and the pupils dressed in their uniforms, acting as hostesses, serve the products of their lesson to the visitors.

Appreciation is frequently expressed by the parents of the work done and its useful application in the home, thus showing the practical results attained.

The eagerness with which the girls apply themselves show their interest and pleasure in the work, and the constant increase in enrollment from year to year proves the value of such work and indicates greater growth in the near future.

Respectfully submitted,

JOSEPHINE SMITH,

December 15, 1911.

Supervisor.

REPORT OF SUPERVISOR OF MUSIC

Report of the music department in the Grade Schools is hereby submitted:

The policy of considering music a subject through which the children are to be developed rather than merely a pleasant diversion, results in the same systematic and thorough instruction in music as that given in other branches. We endeavor to bring music into the life of every child and through music to awaken a keener susceptibility to the good and beautiful.

The course of study has been followed with but little change, the principles involved being developed and strengthened by continued study.

Among the events of the past year the following deserve mention:

1. The music for the several parents' days and other times of celebration at the different buildings was well prepared and acceptably sung. This feature always arouses interest among the parents as well as the students.

2. In November, 1910, a lesson in musical appreciation was given at the Central Grammar school. This lesson gave the teachers an opportunity to judge of the musical experience of the children. The results were gratifying.

3. On May 26, 1911, the entire Central Grammar class sung with orchestral accompaniment at the afternoon concert of the Fitchburg Choral Union. The pupils showed a keen interest and sang with great credit.

4. On June 27, 1911, "The Lady of Shalott," a cantata, was presented by the Central Grammar chorus. The several solo parts were taken by the pupils.

5. On September 22, 1911, a teachers' meeting was held, at which the supervisor explained the new outlines and a few splendid folk dances were given by children from the fourth to the sixth grades.

Looking forward into the new year, the following subjects appear for consideration:

1. The new plan for bringing artistic music into the lives of the children through performances in the schools of specially prepared programs by professional singers and instrumentalists.
2. The meeting of the several seventh and eighth grades throughout the city, for a general assembly, at some time during the school year.
3. The hope that some time we may own a mechanical player for illustrating the form and style of our standard classics in music.

Results of the past school year show interest, energy and progressiveness in the study of music, in grades below the High school. The great interest of the members of the School Committee and the Superintendent has made possible these results.

In conclusion permit me to express my appreciation of the efficient work and hearty co-operation of the teachers and principals. Their professional spirit is the foundation of all good work. Under these conditions the work of the supervisor is of absorbing interest, and ambition is stimulated to a high degree.

Respectfully submitted,
AMY L. CONNOR,
Supervisor.

December 18, 1911.

PENMANSHIP

My work as supervisor of writing in the grades began at the opening of the present school year in September, and as sufficient time has not elapsed to make it possible for me to submit a complete report, only a general statement is attempted at this time.

The only difference between the present course and that of former years is that we are attempting to teach the subject in such a way that the student will write not only a legible hand, but one that combines the essentials of rapidity and freedom as well. Of late years, particularly in cities and commercial centers, there has been an almost general demand for a simpler, more compact, and easier style of writing than any hitherto taught. Schools are now seeking to adopt a style that will occupy less space, have more freedom in its execution and answer more fully in other respects the practical purposes to which it is put in this day of dispatch. The "good hand" of a few years ago will not meet the wants of today, and so important is a rapid, easy handwriting considered by business men, that the aspirant for a position in a counting room or office cannot hope for success therein without it.

Up to within very recent years the idea has been quite prevalent that a person could not become a good penman unless he happened to be talented in that direction. A greater mistake has never been made. It is being demonstrated, at the present time in many school systems, that all school children who are not handicapped by some mental or physical defect may develop into easy, rapid, legible writers by the time they complete the grammar school course, provided they are properly started and the teaching made uniform throughout the grades. It is not by sleight of hand, nor by some particular movement that requires great skill, nor by a swing of the arm or a twist of the wrist, that the ability to execute a good practical handwriting is acquired. It is no great thing, but many little things that

demand attention and constitute the difference between the very good and the very bad handwriting.

Considerable time this year has been given to emphasizing the little things. Beginning in the third grade, where writing is first encouraged, the pupils are taught to assume and maintain a healthful position at the desk; next, to use the muscles of the arm and shoulder as the pen-propelling power, while the finger muscles simply hold the writing implement. When these points are thoroughly fixed, a series of movement drills are given to develop the muscles of the forearm and get them under proper control. As soon as these are mastered to a satisfactory degree the letter forms are given and the steps in the pathway of conquering them are taken up in the following order: First, learning the form, or getting the correct idea from observation, which, to be of any value, must be accurate, comprehensive, and analytical. The more distinct the conception or impression, the clearer will be the reproduction. The second step is understanding the form, its proportions, etc., and the third step is the reproduction of the form. Sentence writing is also taught in connection with the letter forms.

The work in the different grades at the beginning of the year was very similar but the pupils in the higher grades have progressed much more rapidly than those in the lower, which was to be expected. The best papers are approved and posted in the school room for the purpose of helping the deficient and encouraging the capable, and it is hoped that the work as a whole will progress far enough so that a writing exhibit may be held in some centrally located school building before the closing of the present school year.

Respectfully submitted,

CHARLES E. HUTCHINS, *Supervisor.*

December 10, 1911.

REPORT OF THE DIRECTOR OF MANUAL ARTS

Fitchburg, Mass., Dec. 1, 1911.

MR. JOSEPH G. EDGERLY,
Superintendent of Schools

DEAR SIR:—

My first annual report of the work of the Department of Manual Arts is herewith respectfully submitted.

The intimate relationship of mental and motor activity, and the important part taken in industrial life by the manipulation of material and the use of tools, together with the close relation which æsthetic judgment bears to right living and to the industrial supremacy of the nation make instruction in Manual Training and Drawing a fundamental necessity in the public schools.

Manual Training and Drawing are mutually interdependent phases of the industrial arts.

Neither can attain its greatest efficiency in the schools independently of the other. Moreover, unless the work be applied to definite purposes and closely correlated with the other school subjects and life's occupations, it will meet inadequately modern educational standards.

The value of the manual arts as a potent means of vitalizing school work, and of adding interest, clearness, and emphasis to the other subjects can hardly be over-estimated.

The fundamental purposes of the department in the elementary schools are interpreted as follows:—To give instruction that shall develop ability to use drawing as a common means of expression, ability to plan simple objects of use and to execute them with common tools and materials, and to train taste in the industrial and fine arts.

While a complete scheme of public education should ultimately take account of and foster special talent, the primary aim of the work in the elementary grades is not the teaching of art for the benefit of the talented few by the methods of the art

and technical school, nor the mere acquisition of skill, but the more vital one of helping the many to see art through the most direct and simple means, as something intimately related to their daily needs.

Such work should be planned as will justify itself on general grounds, and be valuable for all pupils whatever their future occupations are to be.

The work assigned is of such character that it appeals to the children's interests, can be performed well by the majority, and be taught satisfactorily by the grade teacher. The shop work of the 7th and the 8th grades only requires special equipment and instruction.

The following general results are expected : — ability to use drawing as a means of description, and record of observation, by rapid sketches and by more carefully finished drawings, both pictorial and constructive; a knowledge of processes involved in the construction of simple objects from a variety of materials, and the ability to plan such objects and to select and use the right tools in making them; an appreciation of what is in good taste in the industrial and fine arts.

It has been amply proven that the majority of children can learn to draw sufficiently well for purposes of ordinary practical expression and can be led to appreciate what is in good taste as readily and generally as they can progress in elementary language or mathematics.

The time at present given to the work lacks uniformity in the different schools. In order that a proper adjustment of the course may be deserved it is desirable that the allotment be uniform.

The following states in minutes per week the amount of time which it is hoped will be uniformly assigned in all schools for the coming year.

Grade 1.	100 Drawing.	0 Manual Training.
" 2.	100 "	30 "
" 3.	90 "	30 "
" 4 to 8.	90 "	120 "

The conviction is becoming general that the proportion of time devoted to this work is incommensurate with its importance as a school subject. In view of the prominence of Fiteh-

burg in the skilled industries she can hardly afford to be behind hand in providing for more training of the sort that will prepare her children adequately for the industrial life, some form of which the majority is destined sooner or later to enter.

The following topics are at present included in the course: Illustrative Drawing, Object Drawing, Nature Drawing, Color Drawing, Paper and Cardboard Work, Book-binding, Weaving, Sewing, and Wood-working. To these Modeling, Work in Metal, and Printing will shortly be added.

Two shops have been equipped this year in the high school building, for work in wood, to accommodate pupils from the 7th the 8th grades and freshmen and sophomore pupils of the high school. Indications at present are that these shops will be inadequate to accommodate all classes in Manual Training in another year or two. A third room is being equipped for printing and book-binding for 8th grade and high school pupils. The opening of this room will relieve possible congestion in the wood-working shops for a time. Equipment is also being provided for high school pupils. Each grade school has been provided with a sewing machine, and the sewing department in the high school is to have necessary equipment added during the year. It is hoped that some room will be provided in the near future for the installation of the lathes and other machinery donated to the high school some years ago.

Constructive work in cardboard and elementary book-binding has been introduced into the 4th and 5th grades for all boys and girls. Weaving and book-binding in the 6th grade for boys, and sewing for the girls. Wood-working in the 7th and 8th grades for all boys, and sewing and cooking for girls.

The introduction of these topics has met with general approval on the part of the teachers, and an appreciable measure of success has been attained.

The classes in wood-working are conducted by Mr. Wellington and Mr. Wholley, each of these teachers at present taking an equal number of classes of the different grades. The improved equipment and facilities have added a wholesome seriousness of purpose to the work, and results have been greatly improved.

The freehand classes in the high school are conducted by Miss MacIntyre. Her program at present is such as to neces-

sitate at times from three to five different grades of pupils in one class, and the size of some of these classes is larger than is conducive to greatest efficiency in teaching and satisfactory results.

The Mechanical Drawing classes are conducted by me. While the general conditions and program are improved over last year the full program and large classes make demands upon my time and energy that could be used to much better advantage in making my work as Supervisor of Drawing and Manual Training in all grades a practical possibility.

I would respectfully recommend the employment of an assistant to aid in both the freehand and mechanical drawing, and to take up the work in printing.

The Sewing classes in the high school are conducted by Miss Hoyt. The work in drawing, constructive work, and sewing in the grades below the high school is supervised by Miss Eames and she is assisted by Normal students with the boy's constructive work in grade six while the girls are taking sewing.

The following is a detailed consideration of the topics taught:

ELEMENTARY SCHOOLS.

Illustrative Drawing. The work described under this topic includes the making of illustrations, maps, diagrams, working drawings, and other drawings used as a means of description when the objects themselves are not at hand. This has distinct value as a means of developing imagination and power of expression.

The graphic expression of an idea or image existing in the mind forces that image to its utmost clearness, thus strengthening power to visualize and arousing desire for keener observation of objects themselves as no other means can do.

The modification and recombination of these images leads to the mastery of drawing as a practical language for describing new ideas, the means employed by the architect, engineer or designer in formulating and defining his conceptions and which is valuable in almost every occupation and walk of life.

Illustrative Drawing is begun in the first grades and continued throughout all. Drawing, like any other form of expression, is learned primarily through imitation of the way some one else uses it. Accordingly, children receive the most effective stimulus by seeing the teacher and other children draw, by collecting pictures, such as magazine illustrations, etc., related to the subjects they are drawing so as to see how the forms and ideas have been expressed by others, and by seeing the work of other children. The important thing is that the children draw. The free expression of ideas by drawing comes easily to all young children and develops rapidly through appeal to their interests and encouragement by example rather than by precept. Young children are satisfied to depict at first by crude symbols the ideas which things suggest, primitive narrations of what they know about the objects rather than true representations of what their eyes see at a given moment. It is impossible to secure, at this stage, close observation of the objects themselves, yet children are interested in and are ready to draw pictures illustrating their games, house occupations, and incidents or objects with which they are familiar and which make vivid impressions on their minds. These apparently complex topics are in reality simpler for the children to draw than the simple geometric type forms, which to them are meaningless. The resulting drawings are crude and often unintelligible to an adult yet they are full of meaning to the child who makes them. This stage of development has a definite value of its own which consists primarily in the foundation of a habit of ready graphic expression of ideas, and should be given free exercise while it continues.

The facility gained by the child during this period in drawing in his own way the things which interest him, with constant encouragement, example, and sparing criticism is of the greatest advantage to the next stage of the work. Unless this facility becomes a habit before the age of self-consciousness and hesitation is reached it will be difficult to develop it later, and subsequent training in ability to observe closely and to record accurately will be attended with much greater expenditure of time and effort.

Gradual improvement is expected and realized from practice and from the work in drawing from the objects themselves,

with which the descriptive drawing is closely related and through which the children are continually gaining skill in the expression of facts of form and appearance.

The results should not be judged by adult ideas of perfection but by reasonable attainment for each grade, not far above the average of the work of that particular grade.

As the interests of the children broaden the use of drawing is gradually extended to the illustration of all school subjects, for example, objects, incidents, maps, and diagrams relating to history, geography, literature, arithmetic, nature study and physics.

In the upper grades, topics to be studied for some time under different aspects are made the subjects for work in sketch books, in order that the children may be induced to gather and record data regarding these particular topics from different sources. In connection with the manual training, opportunity is abundantly afforded for experimentation in sketching different shapes of objects, which are to be made, and in outlining definite plans and patterns. In these ways children are led to see drawing as a thing of use and necessity and develop ability to apply it accordingly.

The human figure is a most necessary element in illustrative drawing. The difficulty of drawing the figure well and the limited amount of time now allotted to drawing make it impossible to obtain results that might be deserved. Enough special study is given to it however to bring about some progress from grade to grade and to develop an appreciation of good figure representation in books, pictures, etc., and of the difficulties which such representation involves.

Object Drawing. Study of the form and appearance of objects through graphic representation develops power to see, and ability to record observations correctly.

These are the basis of industrial skill and æsthetic enjoyment. Such study helps to focus attention upon the object and makes the eye alert to subtle differences and discrimination. While lack of the close observation which training in representation would supply leaves the mind with too few clear cut three dimensional images for the imagination and reason to draw upon.

The work in the primary grades should develop ability to

draw well a number of objects familiar and interesting to the children and gradually increase their graphic vocabulary. In each succeeding grade the work should enable the children to draw objects with greater accuracy and expression, and in positions and combinations which demand increased effort and power.

In grade one emphasis is placed upon ability to express general characteristics so that the object may be recognized from the drawing at a glance. Results are criticised through incidental suggestion made perfectly by drawing some one thing better for the children to see.

During the first weeks the copying of simple outlines of objects from the teacher's drawings on the board, is suggested. When children are able to do so they at first follow the teacher line by line. When children are unable to begin with the pencil or crayon the outlines are copied by laying splints, petals, or lentils and drawn later. These exercises give the children their first acquaintance with the fact that putting lines together in certain directions produces pictures of objects which they recognize.

Through combining two or more figures to tell a story, for example, a chair and a table set with dishes, these exercises are related to illustrative drawing and children gain their first experiences in the use of the vocabulary which they are acquiring and develop a readiness to use drawing as a means of expression.

The drawing of a few typical things from the objects, such as fruits, vegetables, simple toys, etc., is introduced gradually. Young children draw almost wholly from memory and the object serves at first merely to make the imagination rather than as a model to follow.

In grade two emphasis is placed upon the study of a few typical things by devoting a series of lessons to each for the purpose of enabling the children to draw these particular things well. Development of interest and ability progresses more rapidly when the children work for several consecutive lessons upon the same topic expressing it each time in a different way, for example: by drawing with the teacher, by cutting the shape from paper, drawing from the object itself, drawing the object from memory, sketching some incident involving the use

of the object and studying pictures of the object. Each lesson thus presents some new phase and a familiar background for reference of new elements.

In grade three emphasis is placed upon the study of objects more complicated in form and upon the better representation of general proportions, directions of characteristic lines, and proportions of spaces between parts—but no attempt is made to teach the representation of the third dimension.

In grade four emphasis is placed upon the correct representation of general shapes, proportions and characteristics. At this stage children appear to lose interest in making drawings which record merely the marked or general characteristics and begin to appreciate the proportions and peculiar characteristics of particular objects, and to show a desire to have their drawings look like the particular object before them.

While they realize the solidity of objects and the effects of distance and foreshortening, they are as yet too immature to analyze and reproduce these effects without more expenditure of time and effort than is justifiable. Especial emphasis is therefore placed in this grade upon the selection of characteristic view and the study of simple objects in which the perspective effects of retreating rectangular surfaces are not prominent. The representation of these effects is treated merely as incidental, and definite study of them is postponed until the children shall have had opportunity to acquire a trustworthy working knowledge through necessary practice in expressing things easily understood, instead of requiring them to learn technical principles which they would have neither the time nor ability at this stage to apply.

An important phase of the teaching in this and the following grades is that of leading the child to place gradually increasing dependence upon his own power to observe rather than upon the criticism of the teacher. By comparing his drawings with the objects to discover how they can be made to look more like them, and modifying results accordingly, he acquires confidence in his ability and learns to see as he never could learn to see through involved explanations of appearances by the teacher who of necessity sees the object from a different station point.

Another important phase is that of alternating the making of rapid sketches which express as much as possible by a few lines or strokes, with carefully finished drawings worked over and made as correct as possible. The first develops vigor in drawing, and ability to see and note quickly and expressively the chief characteristics, the second cultivates power to make exact records of close observation. Without the first the results tend to become mechanical and fussy, and without the second they tend to become careless and unreal.

In grade five the same general methods are employed as in grade four. More difficult objects are drawn and some emphasis placed upon the study of effects of distance and change in level, in objects involving circles.

In grade six the systematic study of perspective effects is begun and continued through grades seven and eight. The method of presentation is not that of explaining and illustrating the principles and then to apply these to the drawing of things so as to produce the desired effect, but the more logical and effective one of drawing things in different positions and then studying the drawings, comparing them with the objects, other drawings, and with pictures of similar things until by much practice the children appreciate and use what produces the desired effect. By this method the pupil learns to know when results look right, and the principle of perspective which constitutes the technical grammar of graphic expression are formulated as an expression of what he has found to be true after personal experiment.

The special study of theory relating to foreshortening convergence, vanishing points of converging lines, etc., is brought in incidentally later as a confirmation and formulation of principles which the pupil has already discovered and can use fairly well.

Emphasis is laid in grade six upon representing correctly the effects of foreshortening upon objects involving cylindrical, hemispherical and conical surfaces.

In grade seven emphasis is laid upon the correct representation of foreshortening and convergence in rectangular objects such as on books, boxes, etc.

In grade eight emphasis is laid upon the correct representation of the appearance of objects in different positions, singly

and in various combinations, and with the aid of invisible edges, axes, diagonals, etc.

Nature Drawing. The work in this topic trains ability to represent plant life and growth and develops an appreciation of beauty in nature. It gives familiarity with forms from which many of the elements of design are derived and provides suitable material and preparation for exact scientific study to which it is a natural introduction.

In grades one, two and three children draw twigs, leaves, flowers and plants in simple positions with colored crayons, representing the general appearance and coloring of the specimen as well as they can, and with little detailed criticism. Results are satisfactory if the specimens are recognizable from the drawing and gradual improvement noted.

In grades four and five the children are expected to represent fairly well the growth, proportions, general characteristics and colors of leaves, flowers and plants, using pencil, crayons, brush and ink, and to note color, and to learn to draw the specimen in different positions.

In grades six to eight flowers and plants are drawn with more detailed study and different aspects recorded, for example: by drawings made with brush and ink to show by as few strokes as possible the growth and individual characteristics of the plant, drawings with pencil to show botanical details of structure, careful sketches in pencil outline and water color to record the variety and play of color, and by decorative arrangements within a given space and with a harmonious color scheme.

Design. The term design here applies to surface and structural decoration.

Development of appreciation of good design is indispensable to unlimited industrial progress, and necessary to full enjoyment of beauty in nature and art.

Industrial supremacy depends in great degree upon the æsthetic value of manufactured products, and that is determined by the public taste. Æsthetic judgment cannot be imparted. It is the result of growth fostered by opportunity for sympathetic art experiences and appreciation of beauty in all things.

The designers and art producers of each generation as well as the people who are to appreciate and encourage art by their patronage—are among the children in the public schools of the preceding generation.

Unless the instinctive desire for beauty be encouraged in these children it is unlikely that they will regain the power of expression and appreciation which they have lost. Their conceptions of good form, color and proportions, and the terms of art expression will be too few and too vague for use in tasteful selection and sound artistic judgment. There can be little to which beauty in nature and the work of the artist and artisan can make appeal.

The work in design aims to develop good judgment regarding the fitness and beauty of constructed objects through the study and making of objects and ornaments which are suitable for their use and place and that embody good construction, good proportions and relations of spaces, beautiful outlines and color combinations and consistent style. Good taste is trained by familiarity with good examples and by practice in the selection, arrangement and appropriate application of the elements of design so that the decoration shall truly ornament and beautify, and not interfere with the construction and use of the object.

Very little effort is made in the primary grades to have children produce original designs. Young children have few ideas of design, and the presentation of simple yet excellent arrangements furnishes a foundation upon which future attempts at originality may be based. In developing taste it is much more important that the first productions be beautiful than that they be original.

In grades one and two emphasis is placed upon the following :—Practice in drawing borders of simple units to a time count, corresponding somewhat to that which it is impossible to develop by the spacing of unit laid out by dictation or with the aid of a rule. In this, as in penmanship, beautiful form and style are gained not by stopping over one result to perfect it, but by repeating the shape until the hand has mastered it and can use it with increased facility. The style gained from this work shows in the latter designs which must be worked out slowly and with pains-taking care.

Practice is given in the placing of pegs and lentils to invent units and to make borders.

Simple forms, such as holiday souvenirs, etc., are decorated, all placing being indicated by the teacher and imitated by the children to accustom them to examples of good arrangements.

In grade three practice in making borders with more difficult units and counts is undertaken. Emphasis is placed upon the following:—The invention of units and borders with pegs and lentils, with colored crayons and by paper cutting, the decoration of simple forms such as holiday souvenirs, book marks, covers for school papers, etc. Some arrangements being indicated by the teacher and some planned by the children. These designs involve borders and units previously studied.

In grade four emphasis is placed upon practice in drawing surface patterns to rhythmic count, with simple units. In this the children learn to adapt simple decoration to a given space. The elements are limited to the best placing of a plain border on a folder, candle shade, cover of a box, etc., made during the time devoted to constructive work.

Children experiment for best spacing for margins and width of border lines to determine the most pleasing effect. Practice is also given in spacing well one unit or element upon a given surface, such as a floret, or a title to be printed upon a cover to be used for school papers.

In all these problems the effect of the result depends upon well related spaces. The cover titles are printed in plain, carefully planned letters to appear neither crowded nor scattered in the space previously determined.

Application is carried further by having the children design and work out modifications of parts of models such as the sides of cardboard trays and mats, and backs of mounts for match scratches, calendars, etc., made in the manual training periods.

In grade five, emphasis upon developing appreciation of well related spaces, pleasing proportions and contours is continued as a fundamental necessity in matters of taste. The problems include the application of borders, with modifications of the corners, bands as used in stripes and plaids, designs for various objects to be made of cardboard, etc., and cover designs which involve the spacing of two elements, such as the title and an initial or a small ornament.

In grade six special problems involving different applications of good spacing are undertaken. Of these one of the most important and effective is the printing of signs, quotations, cards for room doors, school calendars, etc. In order that such printing will attract attention and still be in good taste, careful planning is necessary. In connection with this work, children learn the effectiveness of good margins, dignified lettering, and well chosen spaces in advertisements, as compared with crowded printing and gaudy ornament.

Children experiment for different effects of spacing and arrangement of broad and narrow stripes for rug designs to be worked out later in weaving exercises.

In grades seven and eight, designs are planned and worked out by the boys in connection with the shop work and by the girls for weaving apparel, etc. One of the most effective problems used in these grades is the treatment of some school subject—such as history, geography, or literature, in book form. This problem necessitates a practical application of many important principles of design. The cover, title page, regular pages and illustrations, head and tail pieces, etc., each constitutes a separate problem in design.

The children study different forms of letters as illustrated by the best simple type in use, and the arrangement of pages as formed in fine examples of printing and book making.

The study—history or literature, etc.—provides the stimulus needed to secure the best results and the making of the book in turn adds its influence to the subject thus treated. Each phase of the topic arouses fresh interest and presents new problems in spacing and ornamentation.

Color. The study of color develops the color sense, leads to the power of discriminating between good and bad combinations, and the development of ability to use color in appropriate and harmonious ways.

During the first three years the children gain an acquaintance with colors by the general use of crayons in coloring printed pictures, in illustrative, object, and nature drawing and the decoration of simple objects.

In grade one—Children learn simply to recognize six spectrum colors, red, orange, yellow, green, blue, and violet, by

finding where these occur in the room and by collecting samples of the colors shown by the teacher.

In grade two—Children memorize the six pure or standard colors as a basis for judging other colors, and learn to discriminate hues of color more exactly,—by picking out objects, the colors of which are most nearly like the samples shown.

In grade three—Children learn to distinguish color values by pointing out objects, the colors of which are lighter or darker values of the color shown, and by watching and selecting colors.

In the succeeding grades the children have general practice in the use of color in connection with nature and object drawing, and learn to choose pleasing combinations appropriate for designs and decorative for particular purposes.

In grade four—The children study color hues, or the steps by which one color merges into another, and experiment to discover how these steps are obtained. They arrange samples which they have collected to represent these steps as nearly as possible and make color charts showing these steps.

In grade five—Children study color hues and make similar charts with water colors, thus making possible more exact grading. In this grade they learn also to make flat washes of color over given areas.

In grade six—Emphasis is placed upon the study of color values, and children make charts showing values of a given color (obtained by a mixture of black or white), in a scale of five carefully graded steps, between a very light and a very dark value. They also practice mixing paints to match given samples.

In grade seven—Emphasis is laid upon the study of color intensities, and children make charts showing intensities of the same color (obtained by a mixture of another color preferably gray with the coloring full intensity or brightness) in three carefully graded steps between the color in its full strength and a gray of the same value. They also learn to mix paints to match any given sample and to produce any desired color.

In grade eight—Children study the inter-relations of hue, value and intensity, and learn to obtain harmonies of color, by copying harmonious combinations from five examples of prints, fabrics, pictures, etc., and from nature; and by bringing given groups of colors to some degree of harmony by mixing a little

of each with all the others, or by mixing each color with some of another.

Picture Study. The development of æsthetic appreciation enhances one's enjoyment of the beautiful in nature and in art, and enriches the content of life.

To develop any general spirit of artistic appreciation which shall raise the standard of public taste the art atmosphere must perforce be created in the public schools. The character of the art which the public of tomorrow will demand and its artists produce will depend largely upon the kind of training the children receive in the schools today, and upon the extent to which they are made familiar with works of art, which record the experiences, aspirations and ideals of the best of those who have gone before.

It is doubtful if attempts to develop æsthetic appreciation of works of art by direct study are of much value before the high school age.

In the preceding years however it is important that the children's delight in pictures, and the use of drawing, color and design be stimulated and encouraged, and their interest in the beauty of common things and surroundings awakened.

A trustworthy foundation for the more intelligent and thoughtful appreciation which can be gradually developed later by direct study is thus provided.

The continued use of lines, tones and colors in the elementary grades gives the children constant practice in expressing their ideas and observations by the same means that the artist himself employs.

Such attempts to use the terms of art expression are necessary to that appreciation which gives the fullest pleasure.

The careful selection and grading of pictures to suit the age of the children is important.

The value of a picture for any grade does not depend solely upon its artistic merit.

The fullest enjoyment in childhood of the art that is within the realm of childhood's comprehension is the best preparation for artistic appreciation in maturity.

First impulses toward æsthetic enjoyment which may later develop into a fine appreciation of art may come from well drawn current illustrations portraying those experiences and

subjects which interest children, as well as from the world's masterpieces.

It is a mistake to suppose that any picture will do simply because it is a masterpiece. It must be selected with reference to the child's range of experience lest great pictures grow to seem commonplace before the time for appreciation of them has arrived.

The artistic value of a picture is not wholly in the information it brings. The awakening of feelings which will later develop into aesthetic enjoyment, is best secured through the stimulus of good pictures upon the imagination. The analysis of the composition of masterpieces hinders rather than helps the child's appreciation of them.

A potent means of developing intelligent appreciation is the selection of some topic and the making of sketches, and collection of pictures illustrating this from all available sources. In leading to the appreciation of local subjects, for example of hills, wood, lake, or river pictures by children living near them, an excellent preparation is made by interesting the children in making notes of their observations in sketch books, of different aspects of their surroundings, at twilight, evening, in storm, etc. These sketches should include general effects, particular details, and some color notes. In addition to these sketches the children should collect from magazines and other sources, pictures and illustrations of landscape details, rocks, trees, hills, etc., which will form a scrap book collection. In these should be included reproductions of the best landscape pictures which can be found.

With aid of this data pupils should make one or more original landscape pictures.

Such attempts however elementary, as the most effective introduction to masterpieces dealing with the topic or subject under consideration.

Any mode of art results from long observation and thought, mastery by the artist of the different moods and phases of that particular subject, and the pupil's best preparation for appreciating the artist production is the making and recording of a series of observations of his own rather than by analysis of the composition of such productions.

The fullest appreciation of any work of art appears to be awakened when the observer has attempted a solution, however primitive, of the artist's problem.

In criticising results it should be borne in mind that it is impossible to measure the success of art work in the schools by the same definite standards as of science, for the arts deal with appreciations and are related to the emotional life and racial development.

It can be tested and confirmed only by the slow course of time.

Manual Training. The purpose of the work in manual training is to secure a vital and vigorous mental reaction through the child's manual activity, and through his interest in the finished product and in the constructive problem.

In grades one, two and three work in paper, thin cardboard, and cloth provides opportunity for the children's first experiences in simple making or expression in material. The tools of these grades are essentially the same for both drawing and manual training, the pencil, ruler, crayons, paste, and scissors, and with these the children quickly acquire considerable dexterity.

The study and use of the ruler is simplified by using rulers in grade one graduated to one-inch, in grade two to one-half inch and in grade three to one-quarter inch.

The processes in these grades include measuring, ruling, cutting freehand and on straight and curved lines, scoring, folding, pasting, coloring, and lettering, and are applied in the making of such things as book-marks, pen-wipers, tags, badges, flags, envelopes, baskets, woven mats, etc., valentines, simple toys, etc.

The work is done largely from dictation and through imitation. In all cases a full size or enlarged size model is presented to the class and the object discussed as to its shape, use, relation to other school subjects, etc. The teacher draws on the board as the children draw, a line at a time, and corrects each step of the work as it progresses. If there is a definite gain in cleanliness and accuracy in drawing and cutting, regardless of absolute standards, results are satisfactory.

At the end of the third year children know the quarter-inch, can rule a straight line between two points, cut on straight and curved lines, can print plain capital letters, and can recognize

and name the simple geometric forms and relations, etc., such as circle, square, oblong triangle, straight, curved, vertical, horizontal, oblique, acute angle, right angle and obtuse angle, diameter, diagonal, parallel and perpendicular.

In the succeeding grades, opportunity should be provided as far as possible, for individual initiative effort. To develop individual initiative, and ability to plan and to carry to completion simple constructive work is one of the most important aims of manual training.

The work of grade four and of the first half year of grade five is at present mainly cardboard construction, which includes the making of various forms and kinds of boxes, candle shades, mats, match scratches, cards involving different geometric shapes, etc. Effort is made to increase the content of this work by pointing out its relation to such industries as sheet metal working, patterns, furniture, and cabinet making, house building, etc., and by illustrating and imitating these directly or incidentally with cardboard models.

The materials used consist of cardboard, twine and paste. The tools are the scissors, punch, and drawing instruments, which include a 45° triangle, compass attachment and rulers. The ruler used in the first half of the year is graduated to one-eighth inch and that used in the last half to one-sixteenth inch.

The teacher is supplied with blackboard tools, consisting of a triangle, a ruler graduated to one-quarter inch and a pair of compasses. Drawing naturally plays an important part in the work and is largely in the nature of instrumental drawing.

First work is done mainly from dictation and care is taken to see that the following is exact. The drawing to enlarged scale, is put on the board exactly as the children are expected to lay out their work, one line at a time, and in their presence.

The blackboard drawing includes the dimensions and proper conventions of working drawings, but these are omitted on the cardboard.

Simple lettering is taught throughout the course in connection with the names of pupils and models beginning with the capitals and later introducing the lower case or small letters—attention being devoted to good form, proportioning, and spacing. While formal definitions of geometric terms are not

expected, care is taken that the correct terms are used and that the qualities of the various forms are known and recognized.

As the work progresses pupils are occasionally required to make fully dimensioned working drawings--following the work of the teacher at the board. The models are then made with but little direction, the board work having been erased and the pupils working from their own drawings.

A reasonable degree of accuracy is secured because of the nature and demands of the work—and these demands increase as the course progresses.

At one stage the work is conducted somewhat as follows:—the completed model, *e. g.*, a box is presented to the class; a few children at the board and the rest at their seats, make sketches of the development, adding laps and the dimensions of all parts. Then over-all dimensions are figured and also the area of the surfaces, and the contents of the box, if possible. Each pupil then makes a box working from these sketches. Such lessons should be conducted with a minimum of leading questions on the part of the teacher.

At another stage each pupil is required to design and to make some object—as a hexagonal tray, of limited size, the sides to be of pleasing proportions and shape and appropriately decorated. Methods of fastening sides, tying, lacing or pasting are left to the pupil's initiative. Preliminary sketches are made and these followed by working drawings before the model is made.

Results are considered satisfactory if the work is clean, the lettering clear, well formed, and well spaced, and the measurements accurate within one-sixteenth of an inch. Incidentally the children have learned the names and qualities of the common geometric figures and methods of constructing them, have gained some general neatness and precision, and have acquired a knowledge of how their materials are worked up into objects.

In the last half year of grade five exercises in book binding and similar work are introduced.

The work will employ many of the same processes as the cardboard construction. Its purpose is to develop greater accuracy in the use of the tools, to give further practice in making simple working drawings, to provide increased opportunity for the development of initiative and invention, and for

correlation with drawing, 'lettering and design ;' and to give some experience in elementary bookbinding.

The articles to be made will lend themselves easily to modifications by the pupils, and a prominent feature of the work will be the planning of the several parts, including the making of the working sketches by each pupil individually. The projects will afford opportunity for invention and will require an application of the pupil's knowledge of construction and decorative design, coloring and lettering.

The materials to be used are heavy pasteboard, book linen, cover and lining papers, tape, paste, sewing linen, and paper for pages, etc. The tools required are essentially the same as for the cardboard work. Presses and sewing frames will not be needed. The projects contemplated in this grade will include such as the following: Note books, covers, memorandum pads, needle cases, calendar stands, clipping files, etc.

In grade six work in book binding will be continued by the boys, while the girls take sewing. More advanced projects, such as bound portfolios and sewed and bound books will be undertaken.

In the latter half of this year the boys will take up exercises in weaving, while the girls continue sewing.

The aim of the weaving work is to provide opportunity for thoughtful, purposeful planning and making through the use of simple materials and processes of textile industry. The looms required for this work are of the simples form and made by boys of the seventh grade woodworking classes. The same operations are performed in using these looms as in any kind of mechanical weaving. The materials to be used are raphia, cotton yarn and jute.

The projects will require constant application of the pupil's knowledge of design and color, and will include such as bordered and plaid mats of warp thread and fillings, and small rugs of warp thread and jute, etc.

The instruction should serve to interest the children in looms, in beautiful textile products, in the materials used in the textile industry, and in the preparation of these materials and the source of their supply.

In grade seven woodworking is introduced and is continued through grade eight. This work is provided for all boys and is carried on in the high school shops.

The purpose of this form of work in the grades is not so much to give proficiency in the technique of woodworking as to develop a general dexterity of handling tools, a comprehension of the problems presented by common constructive work and an ability to plan and carry to completion simply constructed objects of wood.

The prominent place given to woodworking in the scheme of hand training is due to the fact that it provides a greater variety of manipulation, a closer contact through the finished product, with the life and interests of the children, a technique more easily adaptable to the necessity for a somewhat orderly progression of exercises, and a better opportunity for inculcating habits of neatness, order and exactness, than any other form of bench work.

The work of the first half of the year serves as a general introduction to most of the tools to be used, and affords a knowledge of the simplest processes, without insistence on great accuracy.

The work of the last half of the year lays more stress on the development of technique, and introduces more construction, demanding greater accuracy.

The work of grade eight gives opportunity for the individual pupil to apply his knowledge and skill to the solution of constructive problems, and to exercise his initiative in selecting and planning his projects.

Any prescribed course in this work, if rigidly carried out, would result in a certain undesirable uniformity. A series of models embodying certain definite and progressively arranged exercises is provided, however, for those pupils to whom the more desirable individual project work cannot be given with good results, and wide latitude provided for special projects wherever conditions warrant.

Some of the projects which it is expected will be undertaken are book racks, taborets, tables, cabinets, etc., and various objects and repairs needed about the building, etc.

Definite provision is made for the designing of projects in the class room as exercises in drawing, and the carrying out of these designs in the shops.

Throughout the course, effort is made to interest the pupils in good examples of furniture, cabinet work, interior finish, etc., and in the different kinds of woods used, their growth, nature, etc.

The variety of woods used in the work should be as large as possible consistent with necessary economy.

In grade seven the exercises embodied in the models and objects of the first half year include the processes employed in reducing stock of the right thickness to required length and width, sawing on curved lines, modeling with spoke shave, fastening with nails, and sand papering.

The objects at first are such that their usefulness is not greatly impaired by minor inaccuracies in form and measurements. Opportunity is thereby offered to encourage freedom in the use of tools and to give pupils a sense of achievement even though the time given to the work is limited.

The freedom and relative crudity and inaccuracy of some of the results should not be confused with carelessness, and slip-shod or slovenly work.

In making some of the objects the pupils are required to design or determine the shape and size, and to make freehand dimensioned working drawings. In making others they are required to work from drawings provided, in order to learn to interpret the thoughts of others expressed in the form of working drawing.

At the end of the first half of the year the pupils have gained a practical acquaintance with the different saws and planes, with the rule, try square, gauge, spoke shave, hammer, nail set, and sand paper. While they have acquired little skill in the use of these tools they have used them with some degree of freedom and for the right purpose.

They have learned something about the characteristics of wood and have produced some articles for which a real need has been demonstrated.

In the last half of the year the objects afford exercises in the reduction of stock to the three given dimensions, modeling with knife, spoke shave, chisel and planes, boring with auger

and bits, fastening with screws, scraping, filing, sand-papering staining, and finishing.

The models and projects make a greater demand upon the pupil for accuracy, and attention is given to the careful and correct use of the tools.

With the exception of those objects which are designed by the pupils as a part of the drawing lessons the pupils work from finished working drawings provided, and from their own sketches.

The work of this half of the year gives knowledge of few additional tools, but develops the pupils' skill, and adds to their knowledge of processes and to their sense of achievement.

In grade eight the purpose of the work is to develop more fully the skill and judgment of the pupils, and to give them a correct appreciation of their own ability to convert materials into a finished product of practical use and which meets a demand.

The models and projects demand more careful attention to accuracy of measurement, skill of manipulation, more knowledge of joinery and a greater appreciation of fitness to purpose.

At the completion of the course the pupil should possess some degree of hand skill, a readiness to select materials and tools for a given purpose, which comes from familiarity with constructive processes, and a certain judgment based on experience.

Modeling. Instruction in modeling is to be introduced in a number of schools during the year in grades one to six.

The work in this topic aims to train the tactile sense, to help children to realize the third dimension of objects by reproducing them, and to suggest the uses of plastic material.

Practice in this concrete method of representation results in increased hand skill and appreciation of form, increased ability to represent by drawing, and ability to think in terms of three dimensions.

In grade one the children will at first imitate models done by the teacher until ability to represent their own ideas is gained.

In grades two and three the children will model things which they are later to draw.

In grades four to six the topics will be similar to those for

drawing. The children will represent in the round or in bas-relief what they are to draw, and will study and make designs for objects involving good spacing and outline, such as tiles, tablets, pottery, etc.

Sewing. Instruction in sewing is given to the girls in grades six and seven while the boys are doing constructive work. The sewing of the seventh grade alternates with instruction in cooking and domestic science.

The purpose of the work is to provide opportunity for thoughtful, purposeful planning and making, through the use of simple materials and common processes of needle-work; to develop ability in plain sewing and mending, to plan, cut and make simple objects and garments, and to select and use materials of appropriate quality, texture and color, and processes suitable for given purposes; to develop good taste in dress, and an appreciation of beautiful needle-work and wearing apparel, etc.; to teach the proper care of clothing, value of neatness and cleanliness, and to give a knowledge of the growth, manufacture, source of supply and method of purchasing the materials used.

The articles made in grade six include—work-bags, needle-books, etc., and the cooking uniforms to be used in the seventh grade. This involves exercises in basting, stitching, over-casting, turning hems, hemming running, overhanding, putting on bands, button holing, sewing on buttons, cutting from paper patterns, and in the use of the sewing machine.

In grade eight such articles as aprons, under-clothing, doilies, etc., are made, and practice is given in mending, darning and patching, etc., and in the further use of patterns and the machine.

Home work is encouraged throughout the course and every effort made to make the work of practical value.

HIGH SCHOOL.

The purposes of the manual arts work in the high school are in general the same as in the elementary grades, but more technical skill, a clearer comprehension of fundamental principles, and more specific application of practical purposes and industrial requirements are expected.

The courses are modified more or less to meet special conditions and the exigencies of the elective system.

The general results expected may be stated under the topics: representation, design, constructive drawing, manual training and sewing.

Representation. The study of drawing should develop increased ability to represent the appearance of things,—from the objects themselves, from memory and from imagination, and to apply the principles of perspective and pictorial and decorative composition.

1. Ability to describe things by quick sketches with greater accuracy and expressiveness, which is of value because it is a convenient and extremely useful means of expression, and because it trains one to distinguish and record quickly the essential features of objects.

2. Ability to make drawings in outline, light and shade, and in color for the purpose of showing the appearance of objects somewhat fully, and which carry representation to greater completeness and artistic effect.

3. Ability to make drawings, the purpose of which is to record exact facts of form and structure, rather than to produce artistic effects and which is valuable because it develops keen perception, affords a means of testing the clearness and precision of the pupil's observation and is useful in the study of botany, zoology, physics and other sciences.

Design. The study of design should further develop good judgment regarding the fitness and beauty of constructed objects, and taste in the things which make up the environment of every-day life.

1. Power to discern between the merely pretty, or attractiveness which is superficial and temporary, and that which is beautiful, gives capacity for enjoyment which is satisfying and permanent. Whatever develops aesthetic judgment raises the standard of living. Better taste demands for its satisfaction more beautiful industrial products and better designers. With the increase of this demand it will become an industrial necessity to train competent designers, and to discover and foster the ability of those of special talent is an important function of the high school.

2. Appreciation of the fine arts in their various expressions, such as painting, architecture and sculpture, in connection with the study of representation. These furnish an intimate interpretation of the spirit of the times in which they find expression hardly second to that of literature.

The faculty of artistic appreciation is almost universal and readily comes under wise leadership, to some degree of power to enjoy and discriminate.

3. Interest in Civic Art. Pupils should know not only the art of the past but the ways in which the problems of today are best met. They should become familiar through photographs, reproductions or otherwise with good designs for buildings, fountains, bridges, water fronts, and other things which may contribute to beauty in communities.

The freehand design work is applied in leather work, stencilling, covers, posters, portfolios, interior decoration, etc. Applications will later be made to printing, textiles and work in copper, etc.

Constructive Drawing: The course in constructive or mechanical drawing should develop ability to note and record from objects or ideas all necessary facts of form and dimensions in such manner that the object may be constructed from the drawing.

This involves—1. Ability to make freehand sketches from existing objects or in formulating ideas of constructive design which adequately describe the structure of the object and contain all required data of form and size.

2. Ability to make finished instrumental drawings, in accordance with the conventions of drafting practice, from which tracings and blue prints may be made.

The constructive drawing is correlated as closely as possible with the shop work, and in the first two years consists mainly of working drawing of furniture and other objects to be made of wood. In the junior and senior years more technical problems are given and options offered in machine and architectural drawing.

The principles of structural design are studied and applied throughout the course.

Manual Training: The results expected from manual training are as follows:

1. That pupils will be able to plan and carry to completion projects relating to the crafts and industries, and to the physical sciences. The ability acquired should be such as to enable them to meet successfully the constructive problems arising in connection with the various school subjects, such as mechanics, mechanical drawing, design, physics and chemistry, and should assist in the solution of similar problems arising later in business or home life.
2. The pupils will possess that skill of hand which is the result of a proper co-ordination of mental and manual activity, and which is of value because it induces a beneficial mental reaction; stimulates one to bring into fuller activity his physical powers, with the consequent benefits; and because aside from its place in the constructive activities it is useful in all other vocations requiring a high degree of efficiency in manipulation—as in surgery, dentistry and scientific work generally.
3. That pupils will have a sympathetic appreciation of the intelligence and labor involved in the planning and executing of the world's industrial work. The work at present consists mainly of wood-working with the ordinary bench tools, but it is hoped to add wood-turning, pattern-making and work in metal.

Sewing: The course in sewing should give increased knowledge of textile materials and processes of needlework, ability to plan and carry to completion simple garments and articles of household use and to select suitable materials, and should further develop good taste and judgment in matters of dress.

The articles made include aprons, under garments, shirt waists, and simple dresses, and articles used in the cooking classes. This year pupils have made the sheets, pillow cases, covers, curtains, etc., required in fitting up the room for work in domestic science.

The work requires constant application of the pupil's knowledge of drawing, design and color. Pictures of costumes, etc., are discussed, and fitness, line and space relations, and harmonious schemes of color considered and applied.

In conclusion I desire to express my thanks to the superintendent of schools and the school committee for their hearty co-operation in supporting and advancing the work of the department.

LUDWIG FRANK,
Director of Manual Arts.

TEACHERS AND SALARIES

1912.

HIGH SCHOOL.

Principal, Charles T. Woodbury, American History and Civics,	\$2,600
Harry C. Barber, Mathematics,	1,700
James A. Chalmers, Chemistry, Astronomy and Geology,	1,200
Marion A. Eason, Industrial Mathematics and Physics,	1,200
Charles F. Edmands, Biology and Algebra,	1,300
*Ludwig Frank, Mechanical Drawing,	2,000
William B. Hunter, Industrial Training,	1,700
†Charles E. Hutchins, Commercial Subjects,	1,600
William A. Leighton, Latin and English,	1,500
Roy W. Lord, Physics, Chemistry and Mathematics,	1,400
James M. McNamara, Physics,	1,700
George E. Wellington, Manual Training,	1,000
Roy A. Wholley, Manual Training,	1,200
Lilla R. Birge, German,	750
Alice W. Brown, English,	900
Irene C. Cowles, French,	900
Jane F. Currier, Shorthand and English,	900
Anna E. Dunn, English and French,	900
Caroline F. Fairbanks, Latin and Mathematics,	900
Maude L. Gifford, Latin, Algebra and History,	900
Alice M. Greathead, French and English,	900
Rina M. Greene, English,	900
Alice B. Hoyt, Special Class,	900
Annie K. Kirby, Commercial Arithmetic and Bookkeeping,	750
Mary B. Lyons, History and English,	700
Marion I. McIntire, Drawing,	900
Josie S. Miner, Typewriting,	900

*Supervisor of Manual Arts in all grades.

†Supervisor of Penmanship in grade schools.

Harriet M. Silsby, History, Commercial Arithmetic and Commercial Geography,	\$900
Mary C. Smith, History and Civics,	900
Helen F. Stratton, English,	900
Maud E. Whitney, English and Algebra,	750
F. Howland Woodward, Singing, one lesson per week,	250
Alga E. Webber, Elocution and Physical Culture, two days per week,	150
Bertha L. Sherwin, Librarian,	750
 SCHOOL STREET.	
Harriet M. Delehanty,	\$760
Dora F. Harris,	720
Jessie E. Worster,	720
Mary A. Dunn,	720
 PLEASANT STREET AND ACADEMY STREET.	
Frederic A. Shattuck,	\$1,200
Adelberta A. Haskins,	720
Mary E. Whitty,	720
Anna E. Ward,	720
Mary J. McGrath,	720
Grace B. Phillips,	720
Grace U. Davis,	720
Ella F. Caswell,	720
Sarah M. Bacon,	720
Mary A. Conrad,	720
Sarah F. Derby,	720
M. Lizzie Kimball,	720
Edna A. Spring,	720
Catherine E. Whitty,	720
Mary E. Hackett,	720
Florence Day,	720
Mary F. Sheehan,	720
Sallie A. Champney,	720
Kindergarten—Lucy A. Bailey,	680
 LUNENBURG STREET.	
Katherine A. McGrath,	\$760
Annie F. Carey,	720
Ellen E. Shaw,	720
Kindergarten—Louise Minott,	560

CLARENDON STREET.	Etta F. Willard,	\$1000
	Annie M. Beer,	720
	Cora A. Day,	720
	Jean C. Horton,	720
	Margaret M. Donnelly,	720
	Mary L. Finnegan,	720
	Marion A. Lowe,	720
ASHBURNHAM STREET.	George C. Francis,	\$1,000
	Elizabeth A. Sheehan,	720
	Mary A. Hayes,	720
	Emma I. Foster,	720
	Elizabeth B. Phelan,	720
	Winifred H. Flynn,	720

SUBURBAN SCHOOLS.

Alice T. Noonan, Wachusett,	\$720
Georgianna K. Donlon, Woodbury,	720
Florence E. Goodfellow, Dean Hill,	720
Marjorie Dahill, Pearl Hill,	560

Third year pupils from the State Normal School serving one year as permanent substitute teachers—salary, \$400

Ethel M. Daley.
 Nellie R. Desmond.
 May P. Dooling.
 Marie W. Ryan.
 Mary G. Tracy.

SPECIAL TEACHERS FOR GRADES BELOW THE HIGH SCHOOL.

Amy L. Connor, singing,	\$800
Alice C. Eames, drawing,	850
Josephine A. Smith, cooking,	900
Superintendent of Schools,	2,850
Truant Officer,	1,400
Clerk,	720

SCHEDULE OF SALARIES FOR TEACHERS, 1912.

Excepting special teachers, or supervisors of special subjects, principals of buildings containing not less than four rooms, and teachers in the high school.

First year of service,	\$300	Fifth year,	\$500
Second year,	350	Sixth year,	560
Third year,	400	Seventh year,	620
Fourth year,	400	Eighth year,	680
Ninth and subsequent years,			\$720.

A two years' course of study at a Massachusetts State Normal school—with a diploma therefrom—shall be regarded as an equivalent for two years' service in teaching, in accordance with the above-mentioned schedule, and each full year's attendance at such school subsequent to the completion of the regular two years' course of study, or a full year's service in teaching under the direction of the teachers of said school, shall be regarded, in computing the compensation, as equivalent to a year's experience in a public school.

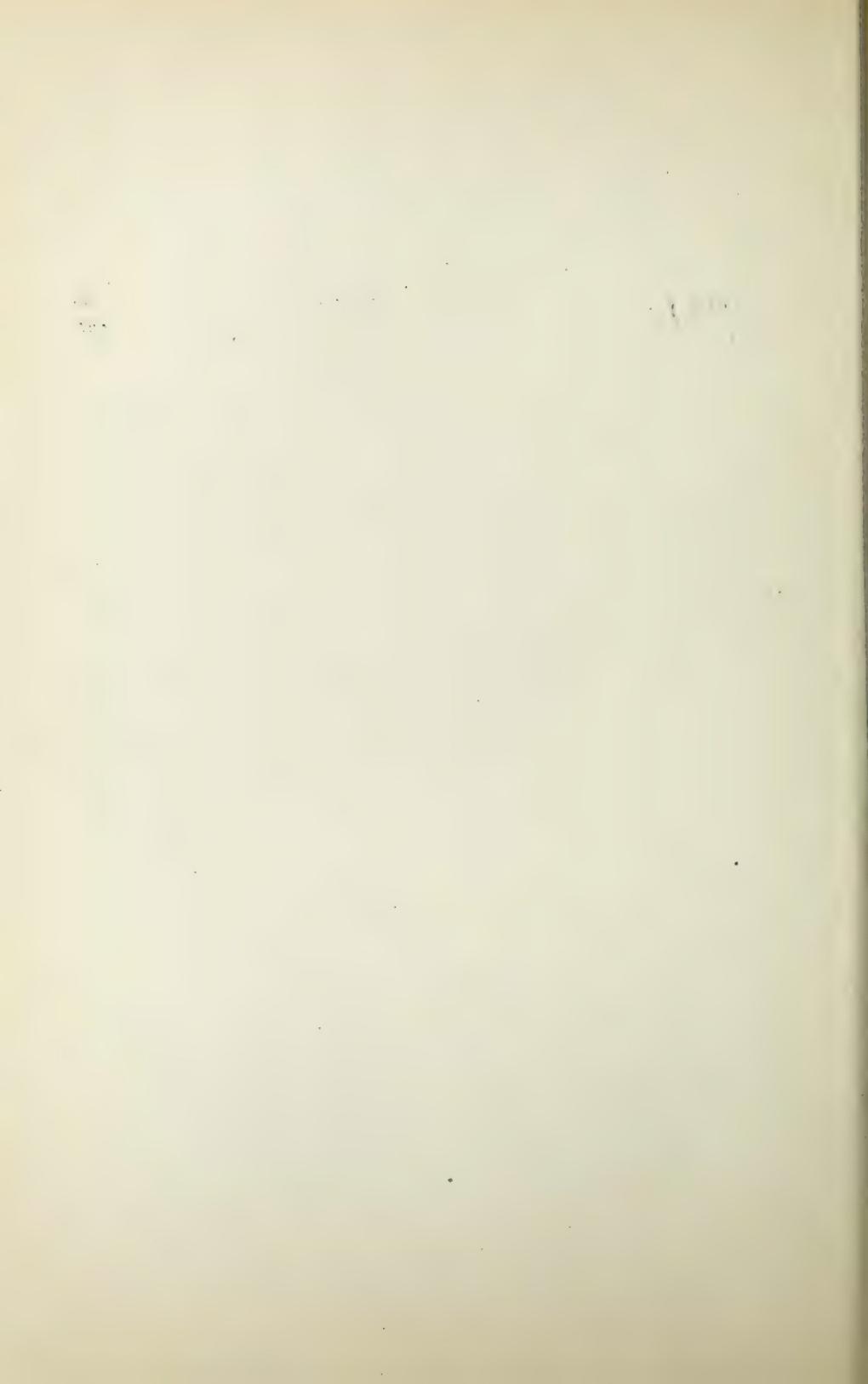
Principals of buildings, containing not less than four rooms, shall receive, unless determined otherwise by special vote, in addition to the salary as determined by the above-mentioned schedule, compensations as follows:—

Four-room buildings,	\$40 per year
Six-room buildings,	60 per year
Eight-room buildings,	100 per year

Salaries of teachers not included in the above-named schedule shall be determined by special vote at the time of election.

The rules of the board make provision for the pay of substitute teachers.

A teacher, upon receipt of a notification of election, should inform the secretary of the board relative to the salary to which said teacher is entitled under the schedule.



SCHOOLS OF OBSERVATION AND PRACTICE

CONNECTED WITH THE

FITCHBURG STATE NORMAL SCHOOL.

CHARLES S. ALEXANDER, DIRECTOR.

PRACTICAL ARTS SCHOOL.

Differentiated courses for the seventh and eighth grades.

Nine schools under the immediate charge of normal students.

Mercie A. Allen, Principal.

Marion F. Lane, Supervisor.

Charles S. Alexander, Practical Arts.

Willis B. Anthony, Practical Arts and Drawing.

Mary L. Carpenter, Household Arts.

Rosamond G. Cook, Assistant Household Arts.

Maud A. Goodfellow, Typewriting.

Charles E. Akeley, Practical Arts.

James B. Spinney, Practical Arts.

George H. Hastings, Agriculture and Mathematics.

Lilla R. Birge, German.

EDGERLY SCHOOL—NORTH STREET.

First six grades and kindergartens.

Eleven rooms under immediate charge of normal school students.

Mary McConnell, Principal.

Ida M. Austin, Supervisor.

L. Frances Jones, Supervisor.

Laura A. Woodworth, Kindergarten.

DAY STREET SCHOOL.

First six grades.

Seven schools under the immediate charge of normal school students.

Caroline G. Hagar, Principal.

Mattie A. Cole, Supervisor.

HIGHLAND AVENUE SCHOOL.

First three grades.

Three schools under the immediate charge of normal school students.

Katherine McCarthy, Principal.

SUPERVISORS FROM THE NORMAL SCHOOL.

Preston Smith, Science.

Flora E. Kendall, English.

Edwin A. Kirkpatrick, Child Study.

Abby P. Churchill, Nature Study.

Elizabeth D. Perry, Music.

Nellie B. Allen, Geography.

Florence M. Miller, History.

Matilda B. Doland, Mathematics and Penmanship.

Louisa P. Hicks, Gymnastics,

George F. Hubbard, Drawing.

Sadie E. Lamprey, Practical Arts.

SCHOOL YEAR, 1911-'12.

First term of twenty weeks began September 5, 1911; ends January 26, 1912.

Second term of twenty weeks begins January 29, 1912; ends June 26, 1912.

SCHOOL YEAR, 1912-'13.

First term of twenty weeks begins September 3, 1912; ends January 24, 1913.

HOLIDAYS AND RECESSES, 1912.

All national and state holidays; the day next succeeding Thanksgiving Day; January 1; one week, beginning Monday, February 26; one week, beginning Monday, April 29; one week, beginning Monday, December 23.

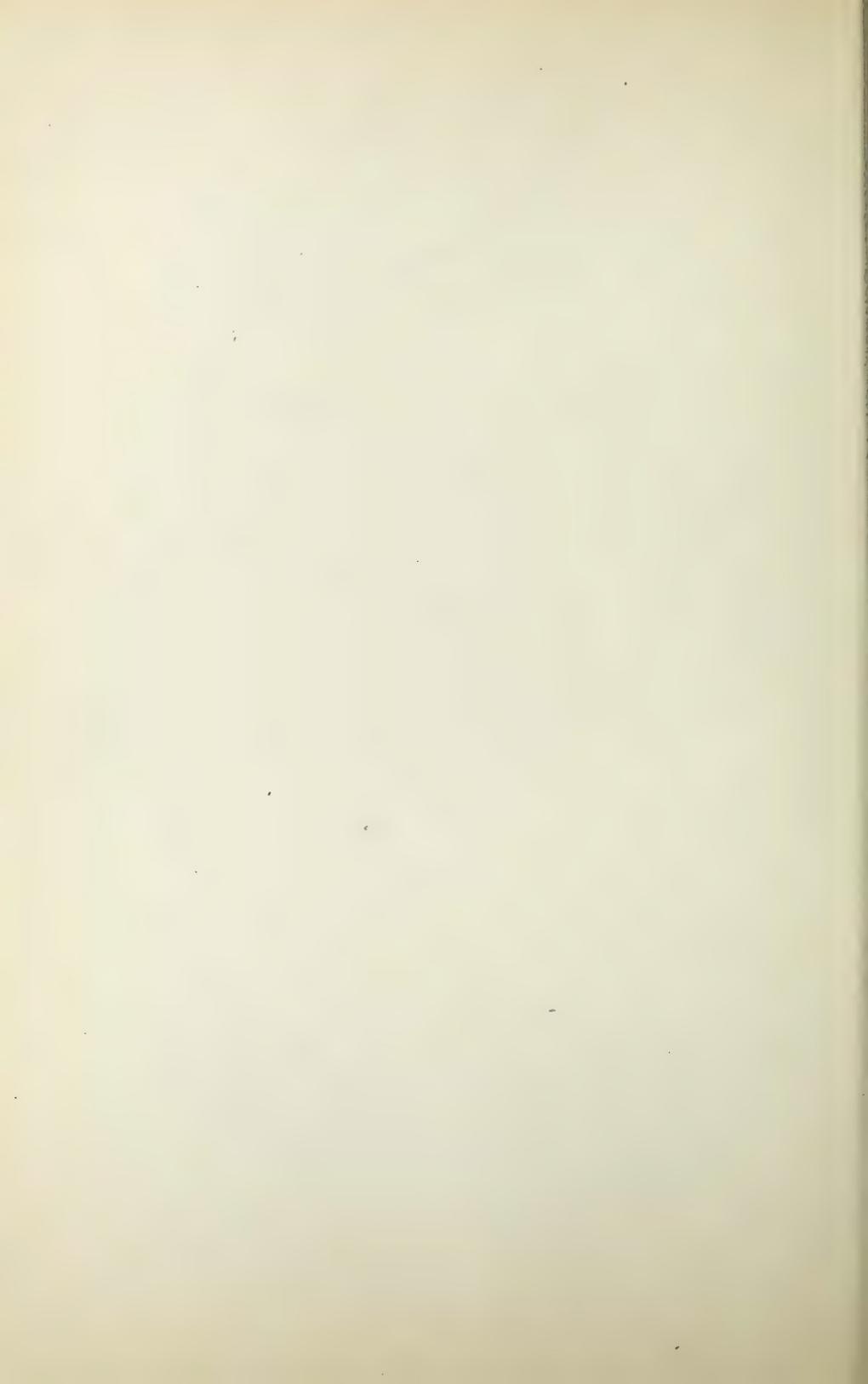
SCHOOL BOARD.

Organization for 1912.

HON. FRANK O. HARDY, Mayor, *ex-officio*,
Chairman,
54 South Street.

JOHN W. DOOLING,
President of the Common Council, *ex-officio*,
579 Water Street.

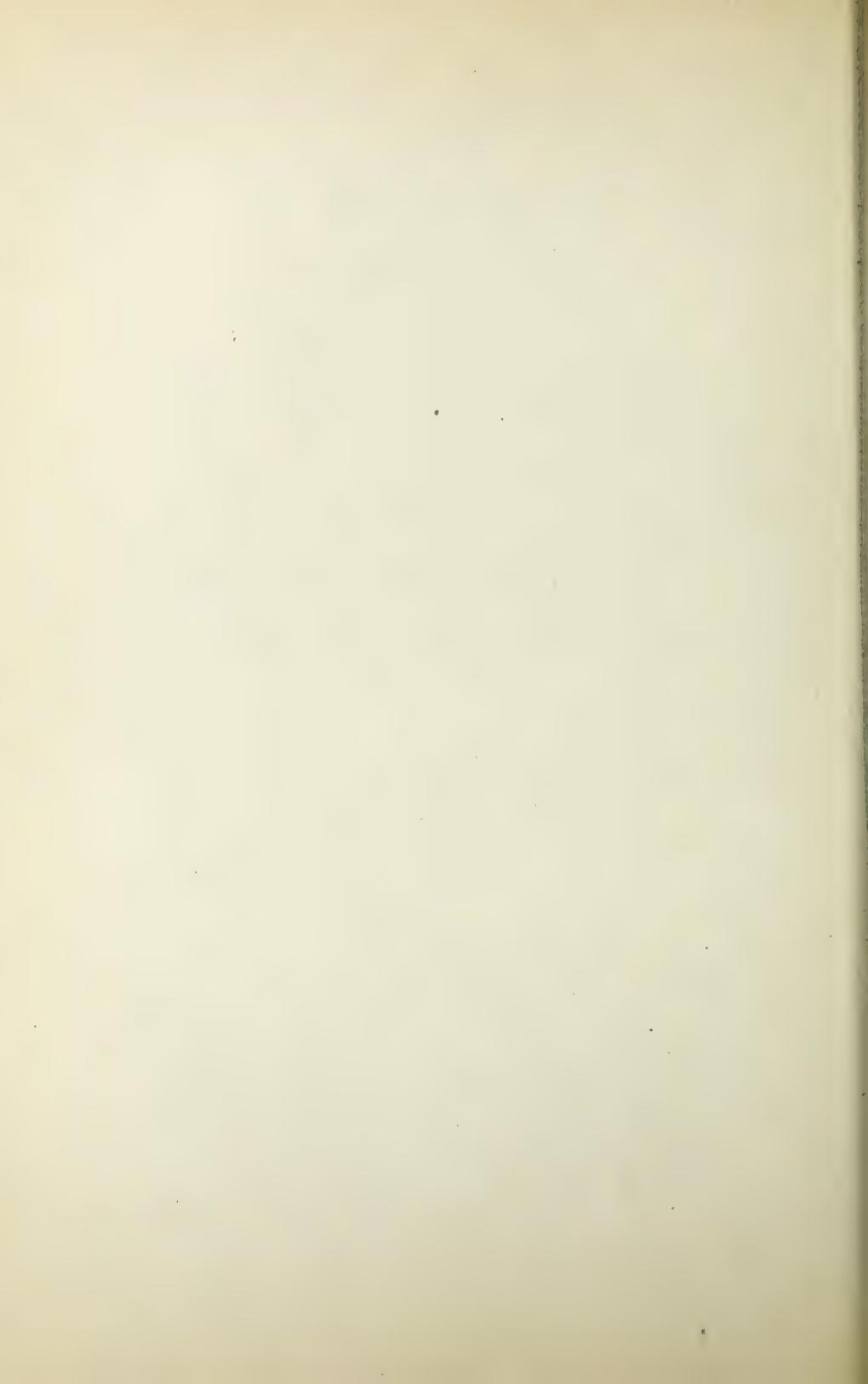
		Term expires.
Ward 1.	Patrick Donlon, 5 Crown street,	January, 1913
	John R. Smith, 181 Water street,	" 1914
	Peter F. Ward, 29 Linden street,	" 1915
Ward 2.	James J. Ryan, 83 Princeton road,	" 1913
	John F. Hayes, 27 Westminster street,	" 1914
	Patrick T. Corley, 25 Kimball place,	" 1915
Ward 3.	George V. Upton, 19 Prospect street,	" 1913
	James Chalmers, 52 School street,	" 1914
	Walter A. Hartwell, 54 Fairview street,	" 1915
Ward 4.	Henry A. Estabrook, 80 Prichard street,	" 1913
	Warner M. Allen, 26 Upland street,	" 1914
	Hiram B. McDonald, 4 Weymouth street,	" 1915
Ward 5.	Henry A. Goodrich, 31 Highland avenue,	" 1913
	Arthur J. Covell, 71 Myrtle avenue,	" 1914
	William L. Walker, 31 Myrtle avenue,	" 1915
Ward 6.	Charles Smith, 41 Smith street,	" 1913
	John F. Kane, 29 Cane street,	" 1914
	John Nash, 206 Summer street,	" 1915



THIRTY-NINTH
ANNUAL REPORT
OF THE
PUBLIC LIBRARY
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG :
H. M. DOWNS PRINTING CO.
1912



ADMINISTRATION OF THE LIBRARY, 1911.

BOARD OF TRUSTEES.

Chairman—Henry A. Willis.

Secretary—*D. M. Travis, †T. F. Gallagher.

Treasurer—Henry A. Goodrich.

Term expires January, 1914—Frederick H. Thompson,
Ezra S. Stearns, Alvah Crocker, *D. Murray Travis, †Thomas
F. Gallagher.

Term expires January, 1913—Henry A. Willis, Herbert I.
Wallace, Rev. J. J. Donnelly, Henry A. Goodrich.

Term expires January, 1912—Joseph G. Edgerly, John E.
Kellogg, †James F. D. Garfield, Charles H. Rice.

Librarian—George E. Nutting.

Assistants—Helen B. Bangs.

Margaret W. Fosdick.

Leon S. Field.

Children's Room assistant—Cora C. Goddard.

Art Gallery, Sunday—George C. Sturtevant.

Pages—Parke A. Barnard.

Elmer J. Dacey.

Janitor—Joseph H. Liversage.

LIBRARY HOURS.

The Wallace Library and Art Building is open every week day from 9 a. m. to 9 p. m., and on Sunday from 1.30 to 5 p. m.

The Art Gallery and Museum are open from 1 p. m. to 5 p. m. on Wednesday and Saturday, and on Sunday from 1.30 p. m. to 4 p. m.

The Children's Room is open from 12 m. to 6 p. m. on week days, except Saturday and during vacation, when it opens at 9 a. m. On Sunday the room is open for readers from 1.30 to 5 p. m.

All departments are closed on legal holidays and also on Sunday during July and August.

*Mr. Travis resigned October, 1911.

†Judge Gallagher appointed October, 1911.

‡James F. D. Garfield died December 14, 1911.

James Freeman Dana Garfield

Born in Langdon, New Hampshire

August 14, 1828

Died in Fitchburg, Massachusetts

December 14, 1911

He was a Trustee of the Fitchburg Public Library from January, 1899, until his death, and from 1899 to 1910 he was the Secretary of the Board. He was constant in attendance at the meetings of the Trustees and in the welfare of the library his interest was unfailing. Few men in any cause have labored with equal zeal and efficiency.

In his official duties and in his daily life, Mr. Garfield was honest and sincere. In the perfection of his character and in the native and cultured wealth of his mind, he commanded our esteem and respect. In the sweeter power of his gentle and compassionate nature, he won our love and a measure of affection which survives the grave.

The recital of his labor on earth is the full record of an honest man. The abundant achievements of his life were perfected in the sunshine of his kind and lovable nature, and the paths in which he walked are fragrant with the blossoms of kindness, affection and charity.

TRUSTEES' REPORT.

To the City Council :

In the record of the present there are few subjects more conspicuous and none more commendable than the rapid growth and amended character of the public libraries. During the twenty-six years, in which our library has occupied the Wallace Library and Art Building, the number of volumes has increased from 17,000 to 54,000 and the yearly circulation from 28,000 to 75,000. In the reference, reading, industrial and children's room the work of the library has been extended in much greater proportion. The details of the work of the library and an exhibit of the income and expenses of the year are fully and clearly stated in the reports of the librarian, the Finance committee and the Treasurer, which are submitted as a part of our annual report.

The Trustees for several years, and especially during the past year, have realized our limited means for the purchase of new books. There is an increasing call for additional works of history, science, useful and fine arts, and standard literature. Without an increased annual appropriation we cannot respond to many reasonable demands.

Compared with the statistics of the libraries of other cities of Massachusetts, the cost of maintenance of the Fitchburg public library and the amount available for the purchase of new books for each one thousand inhabitants, are very much less than the general average. For the ensuing year the fixed charges for salaries, fuel, light and incidentals, in round numbers, will be \$6,500. The income from the permanent fund, the dog fund and fees, about \$2,500. A conservative estimate for new books, which are imperatively demanded is \$4,500. This exhibit of the resources and needs of the library calls for an appropriation of \$8,500. This is not an abrupt or an unpremeditated request. For several years our estimate of the needs of the library has not been fully met in the annual appropria-

tion. The funds at our command have not increased with the growth of the library. The cost of maintenance and the fixed income of the library are substantially the same from year to year. The appropriation made by the City Council determines the amount of money available for the purchase of books. The library is enlarged only through the liberality of the City Government. A few of the conditions, which persuade the Trustees to recommend a larger appropriation, are briefly presented.

I. The increasing population of the city leads to a larger circulation and readers and students of the present age are demanding a greater variety of books.

II. The library, more and more, is becoming an active and useful adjunct of the public schools. In building the library we are building for the schools. The reference and reading rooms and the circulating department are largely patronized by students seeking knowledge of a topical character. To enable the library to fully respond to this accumulating demand, many new books must be secured.

III. The children's room has been the subject of favorable discussion in former reports to which reference is made. This department, constantly increasing in patronage and influence, has developed into a prominent feature of library work. It is a combination of school and reading room and here are gathered many willing and happy pupils. A few come in as a choice between the sidewalk and the shelter of the library, but they are making progress and are passing from the dialect of the street to a limited measure of culture. In finding suitable books for children of unequal age and training, in answering inquiries and in directing study, the library staff is earning and receiving the approbation of the Trustees and the gratitude of many parents. Over twenty-two thousand volumes were circulated in this department during the year.

IV. The population of our city comprises many races of men, each possessing the general character, habit of thought, and mental characteristics peculiar to the nation which he represents. It is the mission of our schools and libraries to inculcate lessons of democracy, to instruct in the duties of citizenship and to mould many types of men into one homogeneous family. The hope of the future is measured by our success in this direction.

Many families are calling for books in their native language which leads to an increasing demand for books in French, German, Finnish, Italian and modern Greek. This demand is reasonable and should be met in a spirit of liberality. In diligence and faithfulness, the librarian and assistant librarians continue to merit the commendation of the Trustees.

EZRA S. STEARNS,
For the Trustees.

December 18, 1911.

REPORT OF FINANCE COMMITTEE.

To the Trustees of the Fitchburg Public Library,

GENTLEMEN:—The report of the Finance Committee is herewith submitted, showing receipts of \$9,237.14, and payments of \$9,235.78, as per annexed schedule. The Hon. Rodney Wallace fund of \$8,000, the Hon. W. H. Vose fund of \$1,000, and the J. J. Hardon fund of \$1,000, are invested in the City's note for \$10,000.

RECEIPTS.

From city appropriation,	\$6,500 00
Worcester county dog fund,	1,855 62
Interest on city's note,	450 00
W. A. Davis, City Clerk, dog fees,	184 00
G. E. Nutting, Librarian, fines, etc.,	247 52
	————— \$9,237 14

SUMMARY OF EXPENDITURES.

Pay roll,	\$5,070 60
Books,	2,029 86
Periodicals,	313 36
Binding,	191 83
Fuel,	398 01
Light,	437 68
Building repairs,	77 28
Miscellaneous,	717 16
	————— \$9,235 78
Balance unexpended,	\$1 36

FINANCE COMMITTEE.

Approved:

CHARLES H. RICE.

TREASURER'S STATEMENT.

The Hon. Rodney Wallace fund of \$8,000, the Hon. W. H. Vose fund of \$1,000, and the J. J. Hardon fund of \$1,000, are invested in the city's note for \$10,000 at four and one-half per cent interest.

THE HERBERT I. WALLACE FUND.

35 shares of V. & M. R. R., balance Dec. 1, 1910,	\$1,017 44
Dividends,	210 00
Interest,	38 94
Balance Nov. 30, 1911,	\$1,266 35

Fund for the care of the Harry Wright bird collection, deposited in Worcester North Savings Institution:

Balance Dec. 1, 1910,	\$94 71
Paid for new case,	61 00
Balance Nov. 30, 1911,	\$33 71

HENRY A. GOODRICH,

Treasurer.

By

G. E. NUTTING,
Librarian.

LIBRARIAN'S REPORT.

To the Board of Trustees,

GENTLEMEN:—I have the honor to submit my tenth annual report as librarian, covering the period from December 1, 1910, to November 30, 1911, the fifty-second year in the history of the library.

The total valuation of all library property as given by the assessors is now \$176,355. The building was never in better condition for the service of the public than today. At the November meeting of the Trustees an "Inter-phone system" was authorized and is now installed. This private telephone connecting all the departments will aid greatly in giving better service to the public.

The City property committee expended \$195.14 this year on repairs. The Fire department supplied two more fire extinguishers for the protection of the upper floors.

The Art gallery received a valuable oil painting from Irving F. Dwinnell, as a memorial to his mother, Ellen Shepard Dwinnell. The title of the picture is "Red oaks, October," by J. H. Greenwood of Worcester. Harry G. Wright added a large number of mounted birds to his loan collection and a new case was provided from the funds donated by the Sportsmen's club.

The Reference department, in charge of Miss Helen B. Bangs for the past thirteen years, is doing a most useful work. Information on almost every conceivable subject is sought by mail, over the telephone or through the use of the large collection of books. A few of the questions will illustrate: "In what manner did the Catacoonomug pond obtain its name?" "Story of Mrs. Rowlandson," "Forestry," "Meaning of 'auld lang syne,'" "Harriman-Roosevelt letters, 1907," "French schools and school systems," "House plans and how to furnish a home," "How to make mushroom catsup," "Cost of an Arctic expedition," "Indian and negro music," "Chrome industry of Baltimore, Md.," "Program for Columbus day in

the schools," "Silhouettes of famous Americans," "French art," "How does the cat purr?"

The subject card catalog is kept in the Reference room and is in constant use by the public. A classified list of fiction was incorporated in this catalog during the summer.

Recently all the reference books were re-arranged. Some were withdrawn and placed in the main library and a few loaned to the High school. This work was greatly needed as quite a few books were out of date and the shelves badly crowded.

A new departure during the year was the "Story-hour" held in the Art gallery on Saturday mornings from December 31st to April 1st. This work was undertaken by the Woman's club Library extension committee in cooperation with Miss Bangs and Miss Fosdick. The story-tellers were Dr. Cordelia M. Whittier, Mrs. John G. Faxon, Mrs. Burnside E. Sawyer, Miss Emma F. Chaffin, Miss Alice Abbot, Rev. George W. Solley, Miss Nellie Allen, Miss Harriet Works, Mrs. Lulu Page, Miss Bertha McGee, Miss Mabel Keyes, and Mrs. Frederick F. Woodward.

The ter-centenary of the English Bible was recognized by an exhibit of various editions of the Bible and collateral material belonging to the library. The collection attracted much attention from visitors to the museum.

Ten traveling collections of photographs were received from the Library art club and exhibited in the Special Exhibit room. The "Typographical art exhibit" was shown in this room from March 28th to April 11th. This traveling exhibit consisted of 184 plates illustrating the correspondence course in printing of the Typographical union of America. The idea originated with Mr. John C. Dana, librarian of the Newark, N. J., public library. The whole exhibit formed an attractive display, and though of special value to printers, proved to be of interest to the general public.

The total number of books in the Children's room is now 3,500 and more shelving is needed. A selected list of 100 good books for girls and boys has recently been printed for distribution in this room and through the schools.

Miss Cora Goddard, librarian of the High school and assistant in our Children's room, gave a lesson on "The use of

books" to the pupils of the Central grammar school. The instruction was given to sections of 12 pupils in the Special Exhibit room on Tuesday and Thursday afternoons during the month of April. The object was to teach the use of books as tools, how to care for books, how to use the card catalog, and the more common reference works. The desired result is to enable the children to use independently all the resources the library offers.

The Fitchburg Teachers' association honored the library by holding an informal meeting in the Art gallery on Tuesday, May 8th. Supt. Joseph G. Edgerly, on behalf of the Trustees, gave a short address. Special exhibits of books on education, and library indexes were shown in the Reference department. Picture bulletins for school use and the herbarium of the class of 1893, F. H. S. (made under the direction of the late E. Adams Hartwell) were exhibited in the Art rooms.

The librarian's financial account, the usual statistics and the list of gifts are appended.

In concluding this report I wish to thank the Trustees and the library staff for their cooperation in the work of the year. Particularly I wish to express my appreciation for a brief leave of absence granted by the Board. A part of the time was profitably spent in attendance at the conference of the American library association at Pasadena, Cal. Later the libraries in Redlands, Riverside, Santa Barbara, Santa Cruz, San Jose, Leland Stanford university, San Francisco, and other places in California were visited. Coming back from the far west I visited the libraries in Portland, Seattle, Vancouver and Minneapolis, and in Chicago the Public library and the John Crerar library.

Respectfully submitted,
GEORGE E. NUTTING,
Librarian.

LIBRARIAN'S ACCOUNT.

RECEIPTS.

From fines,	\$260 52
waste paper,	3 63
deposits, temporary residents,	12 00
miscellaneous sources,	14 42
books lost and paid for,	3 84
	—————
	\$294 41

PAYMENTS.

To City Treasurer,	\$247 52
temporary residents, deposits returned,	12 00
cash on hand,	34 89
	—————
	\$294 41

LIBRARY STATISTICS.

FOR THE YEAR ENDING NOVEMBER 29, 1911.

Days open during the year,	348
Hours open each week for lending,	72
" " " " reading and study,	75.5
Number of volumes at beginning of year,	52,578
" " added by purchase,	1,371
" " " binding periodicals,	136
" " " gift,	210
" " withdrawn,	91
" " lost,	14
" " destroyed by Board of health,	7
" " in the library Nov. 29, 1911,	54,183
" " fiction lent,	50,852
Percentage of fiction lent,	67.5
Total number of volumes lent,	73,981
Average daily circulation,	242
Largest day's circulation, March 11, 1911,	559
Smallest " " August 15, 1911,	89
Circulation from Children's room,	22,699
Largest day's attendance in Children's room,	259
Total number of borrowers registered,	4,884
Average number of volumes lent per borrower,	15

Average number of volumes lent per capita, population 37,826,	1.9
Number of persons using Reference room,	5,738
" " visitors to Art gallery on Sundays,	4,078
" " " all departments on Sundays,	8,418

GIFTS.

Gifts were received during the year from the following persons and organizations: Ætna life insurance co., Miss N. B. Allen, American embassy association, L. H. Bagg, H. C. Barber, Estate of L. D. Bartlett, Belleville commercial club, Bureau of railway news, Mrs. G. F. Burnap, Carnegie library of Pittsburg, City of Boston, City of Fitchburg, W. B. Clarke co., Commonwealth of Massachusetts, L. Crestin, Miss R. Crosby, Daughters of the American revolution, Dixon crucible co., Sir E. Durning-Lawrence, Fitchburg daily News, Fitchburg daily Sentinel, Fitchbnrg state normal school, Grand army of the republic, W. A. Hartwell, Harvard university, A. M. Howe, E. M. Jenks, J. B. Lewis, Massachusetts society Sons of the American revolution, E. F. Mitchell, National business league of America, National child labor committee, National education association, National irrigation congress, F. C. Nichols, G. L. Raymond, C. F. Root, Royal society of Canada, Secretary of Porto Rico, Smithsonian institution, Ezra S. Stearns, S. J. Steinmetz, Mrs. A. Thomson, Ticonderoga historical society, D. M. Tipton, D. M. Travis, Trustees of the Bishop Hale foundation, Mrs. L. A. W. Underhill, United States government, Williams college, H. A. Willis, Woman's educational association.

MASSACHUSETTS LAW TO ENCOURAGE "INTER-LIBRARY LOANS."

[CHAP. 140.]

An act to enlarge the usefulness of the free public library system. Be it enacted, etc., as follows:

SECTION 1. Any free city or town public library may lend its books or other library material to any other free public library in any city or town under such conditions and regulations as may be made in writing by the board of trustees or other authority having control of the library so lending. Any city or town may raise money to pay the expense of so borrowing books and other library material from the library of any other city or town. Nothing herein contained shall be construed to restrict or modify any power which any city or town, or any board of trustees or other authority in control of any free public library, now has to lend to, or permit the use of its books by, persons not citizens of such city or town.

SECTION 2. This act shall take effect upon its passage.

[Approved March 14, 1911.]

ADMINISTRATION OF THE LIBRARY FOR 1912.

BOARD OF TRUSTEES.

Chairman—Henry A. Willis.

Secretary—Thomas F. Gallagher.

Treasurer—Henry A. Goodrich.

Term expires January, 1915—Charles H. Rice, John E. Kellogg, John G. Faxon, A. Eugene Nolen.

Term expires January, 1914—Frederick H. Thompson, Ezra S. Stearns, Alvah Crocker, Thomas F. Gallagher.

Term expires January, 1913—Henry A. Willis, Henry A. Goodrich, Herbert I. Wallace, Rev. J. J. Donnelly.

Librarian—George E. Nutting.

Assistants—Helen B. Bangs.

Margaret W. Fosdick.

Leon S. Field.

In Children's Room—Blanche R. Boyd.

Art Gallery, Sundays—George C. Sturtevant.

Pages—Parke A. Barnard.

Elmer J. Dacey.

Janitor—Joseph H. Liversage.

COMMITTEES.

BOOK COMMITTEE.

Messrs. Willis, Gallagher, Nolen, Stearns and Wallace.

LIBRARY COMMITTEE.

Messrs. Goodrich, Donnelly, Faxon and Rice.

ART COMMITTEE.

Messrs. Thompson, Crocker and Wallace.

FINANCE COMMITTEE.

Messrs. Kellogg, Faxon and Rice.

THIRTY-NINTH
ANNUAL REPORT
OF THE
CITY TREASURER
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912



REPORT OF TREASURER

To the City Council :—

GENTLEMEN :— I herewith submit the report of the City Treasurer for the fiscal year ending Nov. 30, 1911.

Cash on hand Nov. 30, 1910,	\$39,346 78
Receipts during year,	1,634,853 78
	—————
Disbursements during the year,	\$1,674,200 56
	—————
Balance on hand Nov. 30, 1911,	1,640,072 97
	—————
	\$34,127 59

The amounts received and credited and the payments made and charged to the several accounts on the books of this department appear in the following statement :

STATEMENT OF RECEIPTS.

DECEMBER 1, 1910, TO DECEMBER 1, 1911.

Credit to sundry accounts as follows :

Abolition of grade crossing, Rollstone street,	\$38,274 70
Abolition of grade crossing, Rollstone street, state assessment,	43 35
Betterment assessments,	668 60
Bills payable,	670,000 00
Board of Health,	666 64
Cemeteries,	6,100 29
City bonds, municipal loan Nov. 1, 1910,	37,500 00
Collector's fees,	96 15
Commonwealth of Massachusetts,	49,352 80
Debts receivable,	5,780 95
Fire dept., horse and rubber goods,	278 00
House, West Fitchburg,	70 62

Improved sewer system,	\$523 59
Incidentals,	2,970 65
Interest account, funded debt,	1,203 75
Interest account, delinquent taxes,	5,671 61
Interest account, water debt,	545 70
Liquor licenses,	49,524 00
Macadam construction,	65 65
Macadam maintenance,	1,955 92
Military aid, unclaimed,	10 00
Paving construction,	213 58
Paving maintenance,	293 85
Police department,	3,015 85
Printing,	320 00
Public library,	2,287 14
Public parks,	243 20
Repair and care,	1,402 25
School books and supplies,	136 52
School department, tuitions,	719 50
School teaching, refunded,	8 00
Sewer assessments,	2,512 50
Sewer assessments apportioned,	391 40
Sewer construction,	924 83
Sewer maintenance,	151 86
Sidewalk assessments,	981 30
Sidewalk assessments apportioned,	64 48
Sidewalk construction,	386 09
Sidewalk maintenance,	211 33
Soldiers' relief, unclaimed,	88 00
State aid, unclaimed,	22 00
Street construction,	3 44
Street maintenance, St. Ry. taxes,	7,316 87
Street maintenance, sundries,	276 28
Street watering,	61 51
Support of poor, outside,	1,412 84
Support of poor, almshouse,	963 69
Tax of 1907,	58 48
Tax of 1908,	2,285 09
Tax of 1909,	4,928 68
Tax of 1910,	135,283 85
Tax of 1911,	484,710 13

Trust fund, Jonas Marshall income,	\$65 00
Trust fund, endowed cemetery lots paid during 1911,	2,100 00
Water maintenance,	1 00
Water rates,	81,396 81
Water dept., received for service pipe connections,	11,321 46
Water bonds,	17,000 00
	————— \$1,634,861 78
Cash on hand Nov. 30, 1910,	39,346 78
	————— \$1,674,208 56

STATEMENT OF PAYMENTS.

DECEMBER 1, 1910, to DECEMBER 1, 1911.

Charged to Sundry Accounts as follows:

Abatement of taxes,	\$51 99
Abolition of grade crossings:	
Rollstone street,	37,278 98
" " State assessment,	4,795 68
Assessors' assistants,	360 80
Bemis Road bridge alterations,	2,711 73
Bills payable,	549,500 00
Board of Health,	13,989 39
Burbank Hospital maintenance,	16,000 00
Cemeteries,	9,654 01
City Bonds:	
Municipal loan 1909 and 1910,	15,000 00
Ladder truck loan,	244 50
Ashburnham Street school house loan,	1,500 00
East Street school house loan,	2,500 00
Fairmount street fire station equip- ment loan,	800 00
Fire alarm extension loan,	300 00
Grade crossing loan,	3,000 00
High School loan,	150 00
Salem and School street schools loan,	2,650 00

South Fitchburg school loan,	\$900 00
High Street Grammar school loan,	1,300 00
Public park loan,	300 00
Sewer loan,	5,145 00
Sidewalk loan,	3,725 00
Street paving loan,	7,125 00
Street construction loan,	31,800 00
Water loan,	5,000 00
Oak Hill bridge loan,	700 00
Lowe playground loan,	300 00
Hosmer school loan,	4,400 00
Old High school permanent im- provements loan,	2,000 00
Goodrich street school permanent improvements loan,	1,000 00
Depot street bridge loan,	2,000 00
Commonwealth of Massachusetts,	6,065 66
County tax,	28,313 00
Diphtheria epidemic,	2,884 64
Engineering,	4.558 21
Fifth street bridge,	5,730 09
Fire department,	51,736 93
Gypsy moth,	3,812 98
House offal,	3,025 86
Improved sewer system,	84,988 92
Incidentals,	14,655 85
Assessors' incidentals,	784 71
City Auditor's incidentals,	434 41
City Clerk's incidentals,	1,565 75
City Treasurer's incidentals,	1,457 56
Sealer of Weights and Measures incidentals,	242 08
Interest account :	
Funded debt,	36,838 50
Temporary loans,	9,815 86
Water debt,	20,825 00
Laurel street, retaining wall,	1,161 05
Liquor licenses, one-quarter amount to state,	12,381 00

Macadam construction,	\$4,907 39
Macadam maintenance,	14,810 18
Military aid,	594 00
Normal school playground,	927 01
Paving construction,	16,617 06
Paving maintenance,	9,275 64
Police department,	42,969 77
Printing,	2,666 61
Public library,	9,213 60
Public parks,	12,714 88
Public playgrounds,	8,099 70
Repair and care public buildings,	37,558 78
Salaries,	22,731 91
School books and supplies,	6,471 10
School incidentals,	6,562 05
School teaching,	111,672 87
Sewer construction,	10,303 29
Sewer maintenance,	5,428 64
Sidewalk construction,	17,491 12
Sidewalk maintenance,	3,801 56
Sinking fund payments :	
General debt,	2,500 00
Normal school loan,	800 00
School loan,	4,500 00
Sewer loan,	1,500 00
Water loan,	16,000 00
Soldiers' relief,	8,467 70
State aid,	4,321 00
State highway tax,	206 00
State tax,	43,835 00
Street construction,	15,100 68
Street lighting,	35,371 75
Street maintenance,	43,579 37
Street watering,	9,144 70
Support of poor, outside,	8,544 90
Support of poor, almshouse,	8,856 02
Tin bridge, widening,	2,285 44

Trust Funds:

Boutelle-Robinson, fuel,	\$17 40
Marshall income,	65 00
Whitcomb fund,	266 18
E. G. Poole fund,	172 63
Ellen E. Armes fund,	17 50
Water maintenance,	67,832 19
Water Works:	
Land around Meeting-house pond,	682 75
Land around Wachusett lake,	3,737 27
	————— \$1,640,080 97
Cash on hand Dec. 1, 1911,	34,127 59
	—————
	\$1,674,208 56

STATEMENT OF DEBT.

FUNDED WATER DEBT.

Registered bonds, 4 per cent, due April 1, 1922,	\$300,000 00
Registered bonds, 3½ per cent, due Dec. 1, 1922,	12,000 00
Registered bonds, 3½ per cent, due July 1, 1923,	10,000 00
Registered bonds, 3½ per cent, due July 1, 1926,	45,000 00
Registered bonds, 4 per cent, due Oct. 1, 1912-37,	68,000 00
Registered bonds, 4 per cent, due Nov. 1, 1912-29,	18,000 00
Registered bonds, 4 per cent, due Nov. 1, 1930-39,	5,000 00
Registered bonds, 4 per cent, due Nov. 1, 1912-14,	3,000 00
Registered bonds, 4 per cent, due Nov. 1, 1915-40,	13,000 00
Temporary loan, to be paid from proceeds of bonds when sold,	10,000 00
	—————
	\$484,000 00

FUNDED GENERAL DEBT.

FIRE DEPARTMENT LOANS.

Registered bonds, 3½ per cent, due Oct. 1, 1912-16,	\$1,222 50
Registered bonds, 3½ per cent, due Nov. 1, 1912-15,	1,200 00
Registered bonds, 3½ per cent, due Nov. 1, 1916,	200 00
Registered bonds, 3½ per cent, due Nov. 1, 1917-18,	200 00
	—————
	\$2,822 50

GENERAL DEBT.

Registered bonds, 4 per cent, due June 1, 1913,	\$200,000 00
	—————
	\$200,000 00

GRADE CROSSING LOAN.

Registered bonds, 3½ per cent, due Oct. 1, 1912-13,	\$6,000 00
	—————
	\$6,000 00

DEPOT STREET BRIDGE LOAN.

Registered bonds, 3½ per cent, due Nov. 1, 1912-16,	\$10,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1917,	1,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1918,	500 00
	—————
	\$11,500 00

SCHOOL LOAN.

Registered bonds, 4 per cent, due May 1, 1923,	\$107,000 00
Coupon bonds, 4 per cent, due May 1, 1923,	93,000 00
Registered bonds, 4 per cent, due June 1, 1925,	50,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1912,	2,650 00

Registered bonds, 3½ per cent, due May 1, 1912-15,	\$600 00
Registered bonds, 3½ per cent, due Nov. 1, 1912-13,	5,000 00
Registered bonds, 3½ per cent, due June 1, 1912-14,	3,900 00
Registered bonds, 3½ per cent, due May 1, 1912-15,	6,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1912-16,	22,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1912-17,	6,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1918,	800 00
Registered bonds, 3½ per cent, due Nov. 1, 1912-16,	10,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1917-18,	2,000 00
	—————
	\$308,950 00

PAVING LOANS.

Registered bonds, 3½ per cent, due May 1, 1912-15,	\$1,600 00
Registered bonds, 3½ per cent, due Nov. 1, 1912,	650 00
Registered bonds, 3½ per cent, due June 1, 1912-13,	2,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1912-14,	1,950 00
Registered bonds, 3½ per cent, due Nov. 1, 1912-16,	4,875 00
Registered bonds, 3½ per cent, due Nov. 1, 1912-17,	2,100 00
Registered bonds, 3½ per cent, due Nov. 1, 1912-16,	10,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1917,	1,000 00
Registered bonds, 3½ per cent, due Nov. 1, 1918,	500 00
	—————
	\$24,675 00

OAK HILL ROAD BRIDGE LOAN.

Registered bonds, 3½ per cent, due	
Nov. 1, 1912-14,	\$2,100 00
	<hr/>
	\$2,100 00

SEWER LOAN.

Registered bonds, 3½ per cent, due	
Nov. 1, 1912,	\$1,000 00
Registered bonds, 4 per cent, due	
Nov. 1, 1912,	35,000 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-13,	1,200 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-14,	2,250 00
Registered bonds, 3½ per cent, due	
May 1, 1912-15,	2,880 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-16,	1,625 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-17,	7,500 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-18,	1,400 00
	<hr/>
	\$52,855 00

SIDEWALK LOANS.

Registered bonds, 3½ per cent, due	
May 1, 1912-15,	\$200 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912,	600 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-13,	1,000 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-14,	1,500 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-16,	4,375 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-17,	2,400 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-18,	3,500 00
	<hr/>
	\$13,575 00

STATE NORMAL SCHOOL LOAN.

Registered bonds, 4 per cent, due	
June 1, 1914,	\$25,000 00
	<hr/>
	\$25,000 00

PUBLIC PARK LOAN.

Registered bonds, 3½ per cent, due	
April 1, 1912-14,	\$900 00
	<hr/>
	\$900 00

LOWE PLAYGROUND LOAN.

Registered bonds, 3½ per cent, due	
May 1, 1912-16,	\$1,500 00
	<hr/>
	\$1,500 00

STREET CONSTRUCTION LOANS.

Registered bonds, 3½ per cent, due	
Nov. 1, 1912,	\$3,500 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-13,	11,000 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-14,	7,500 00
Registered bonds, 3½ per cent, due	
May 1, 1912-15,	21,200 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-16,	20,000 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-17,	21,000 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1912-17,	24,000 00
Registered bonds, 3½ per cent, due	
Nov. 1, 1918,	2,000 00
	<hr/>
	\$110,200 00

“ FITCHBURG SEWER LOAN, ACT OF 1901.”

Temporary loan, to be paid from pro-	
ceeds of bonds when sold,	\$100,000 00
	<hr/>
	\$100,000 00

MUNICIPAL LOAN, 1909.

Registered bonds, 4 per cent, due Nov. 1, 1912-15,	\$44,000 00
Registered bonds, 4 per cent, due Nov. 1, 1916-19,	42,000 00
	—————
	\$86,000 00

MUNICIPAL LOAN, 1910.

Registered bonds, 4 per cent, due Nov. 1, 1912-15,	\$16,000 00
Registered bonds, 4 per cent, due Nov. 1, 1916-20,	17,500 00
	—————
	\$33,500 00

MUNICIPAL LOAN, 1911.

Temporary loan, to be paid from pro- ceeds of bonds when sold,	\$90,000 00
	—————
Total funded debt,	\$1,553,577 50
	—————
Total amount of sinking funds :	
General loan sinking fund,	\$185,472 05
School loan sinking fund,	120,146 61
Sewer loan sinking fund,	34,183 59
State Normal school loan sink- ing fund,	19,908 06
Water loan sinking fund,	87,702 89
	—————
	\$447,413 20

Total net funded debt of the city Nov. 30, 1911, \$1,106,164 30
 Total net funded debt of the city Nov. 30, 1910, 1,039,141 44

Increase in net funded debt, \$67,022 86

Included in the general funded debt are the school loans of \$250,000.00, which by the acts of the legislature authorizing same, are exempt in the calculation of the debt limit of the city.

TEMPORARY LOANS IN ANTICIPATION OF TAXES.

City note, No. 35,	\$10,000 00
City note, No. 36,	10,000 00
City note, No. 37,	15,000 00
City note, No. 38,	15,000 00
City note, No. 41,	25,000 00
City note, No. 42,	25,000 00
City note, No. 43,	10,000 00
City note, No. 44,	5,000 00
City note, No. 45,	5,000 00
City note, No. 46,	5,000 00

	\$125,000 00

The following loans were authorized during the year:

Water loan,	\$10,000 00
Municipal loans of \$90,000.00 for the following purposes :	

Street construction,	\$15,155 60
Sidewalk construction,	13,145 40
Sewer construction,	9,163 32
Paving construction,	14,802 84
Macadam construction,	4,854 36
Public play grounds,	8,099 70
Rollstone street grade crossing,	9,154 58
Fifth street bridge,	5,731 34
Bemis road bridge alterations,	3,094 37
State Normal school play grounds,	5,000 00
Widening Tin bridge,	1,798 49

	\$90,000 00

	\$100,000 00

Loans paid during the year from sinking funds:

Water loan, due May 1, 1911,	\$100,000 00
------------------------------	--------------

Loans paid during the year by appropriation:

Lowe play ground loan,	\$300 00
Fire department loans,	1,344 50
Paving loans,	7,125 00
Schoolhouse loans,	16,400 00
Sewer loans,	5,145 00

Street construction loan,	\$31,800 00
Sidewalk loans,	3,725 00
Grade crossing loan,	3,000 00
Public park loan,	300 00
Oak Hill road bridge loan,	700 00
Depot Street bridge loan,	2,000 00
Municipal loan, 1909,	11,000 00
Municipal loan, 1910,	4,000 00
Water loans,	5,000 00
	—————
	\$91,839 50

TRUST FUNDS.

The following sums upon the lots hereinafter named have been paid in during 1911, upon which interest at the rate of 5 per cent per annum is allowed, which income is to be used for the perpetual care of cemetery lots, as follows:

Mrs. F. E. Spooner, Dec. 23, 1910, Laurel Hill,	\$50 00
Mrs. Thomas N. Wilson, Jan. 10, 1911, Forest Hill,	100 00
Elizabeth Ferguson, Feb. 13, 1911, Forest Hill,	50 00
Elmus E. Walter, March 2, 1911, Forest Hill,	50 00
Harriet A. Davis, March 17, 1911, Laurel Hill,	50 00
Mrs. Nellie A. Cushing, March 23, 1911, Laurel Hill,	50 00
Stillman K. Kent, April 4, 1911, Forest Hill,	50 00
Estate Elmer Pierce, April 14, 1911, Laurel Hill,	100 00
J. H. Patten, April 17, 1911, Forest Hill,	100 00
George F. Fay, April 29, 1911, Laurel Hill,	200 00
Samuel M. Adams, May 1, 1911, Forest Hill,	100 00

Jennie M. Grinnell, May 8, 1911, Forest Hill,	\$50 00
Harrison Bailey, administrator, May 9, 1911, Forest Hill,	50 00
Harrison Bailey, administrator, May 9, 1911, Laurel Hill,	50 00
Lillian Legeyt, May 19, 1911, Forest Hill,	100 00
E. P. Rich, June 8, 1911, Forest Hill,	50 00
Arabella T. F. Wright, exc., June 8, 1911, Forest Hill,	100 00
Arabella T. F. Wright, exc., June 8, 1911, Laurel Hill,	100 00
Edward D. Page, June 14, 1911, Forest Hill,	50 00
J. M. Farnsworth, June 19, 1911, Forest Hill,	50 00
H. L. Gere, admr., July 7, 1911, Laurel Hill,	50 00
Eliza J. Atherton, July 21, 1911, Laurel Hill,	50 00
Emma B. Peabody, July 28, 1911, Forest Hill,	50 00
Benjamin G. Parshley, July 1, 1911, Laurel Hill,	50 00
Erma C. Cobleigh, August 7, 1911, Laurel Hill,	50 00
A. B. Peck, August 18, 1911, Forest Hill,	50 00
Frank H. Sibley, admr., Nov. 17, 1911, Forest Hill,	50 00
Laura A. Bacon, Nov. 23, 1911, Laurel Hill,	100 00
William Cairns, admr., Nov. 29, 1911, Forest Hill,	50 00
Charlotte L. Raymond, Nov. 29, 1911, Laurel Hill,	50 00
Dr. W. D. Ball, Nov. 29, 1911, Laurel Hill,	50 00

	\$2,100 00

Amount deposited previous to Dec. 1, 1910,	<u>\$34,269 00</u>
	<u>\$36,369 00</u>

Income from the following trust funds, paid to the Overseers of the Poor:

Nathan Whitcomb fund,	\$7,948 06
Nathan Whitcomb real estate, (appraised value),	5,000 00
Elizabeth M. Boutelle-Robinson fund,	1,000 00
Edward G. Poole fund,	4,932 38
Jonas Marshall income fund, 13 shares	
Fitchburg R. R. (market value),	1,703 00
Ellen E. Armes fund,	500 00

By vote of the City Council passed Oct. 20, 1908, a demand note of the City of Fitchburg, dated Dec. 2, 1908, drawing interest at the rate of 4½ per cent per annum, was issued for \$10,000.00 and turned over to the Library Trustees to represent the value of the Wallace fund of \$8,000, the Vose fund of \$1,000 and the Harndon fund of \$1,000.

RESOURCES.

Taxes uncollected,	\$140,958 15
Debts receivable,	7,011 38
Sewer assessments,	6,015 56
Sewer assessments apportioned,	7,030 36
Sidewalk assessments,	5,065 02
Sidewalk assessments apportioned,	718 57
Due for service pipe,	3,683 90
Due for water rates,	7,928 04
Commonwealth of Massachusetts,	3,176 21
Cash on hand,	34,127 59
	<u>\$215,714 78</u>

INTEREST ACCOUNT.

APPROPRIATIONS AND RECEIPTS.

Appropriations, general debt,	\$36,838 50
Appropriations, water debt,	20,825 00
Appropriations, temporary loans,	9,000 00
Assessments apportioned,	575 62
Overdue taxes,	5,671 61
	—————
	\$72,910 73

PAYMENTS.

On water loan,	\$20,825 00
On funded loan,	36,838 50
On temporary loan,	9,815 86
On trust funds,	2,717 80
	—————
	\$70,197 16
Debit balance Dec. 1, 1910,	\$4,752 53
Credit balance Dec. 1, 1911,	2,713 57
	—————
	\$2,038 96

COLLECTION OF TAXES.

The Collector received from the Assessors warrants for the collection of taxes for the year 1911, as follows:

City tax,	\$520,871 38
County tax,	28,313 00
Overlayings,	5,186 65
Sewer and sidewalk,	3,064 06
State highway repair tax,	206 00
State tax,	43,835 00
Street watering,	7,958 77
Betterments,	16 00
Brown tail moth,	1,840 14
Special warrant, No. 1,	270 40
	—————
	\$611,561 40
Non-resident bank tax,	5,656 21
	—————
	\$617,217 61

Collected in August,	\$568 18
Collected in September,	296,818 55
Collected in October,	165,187 88
Collected in November,	22,135 52
Abatements,	1,165 17
	—————
Balance uncollected Nov. 30, 1911,	\$485,875 30
	131,342 31
	—————
	\$617,217 61

Divided as follows :

Due on real estate,	\$105,874 55
Due on personal property,	17,081 76
Due on single polls,	6,838 00
Due on polls with property,	1,548 00
	—————
	\$131,342 31

OLD TAXES.

Outstanding as follows;

	Bal. Nov. 30, '10	Abated	Collected	Bal. Nov. 30, '11
Tax of 1907,	\$153 62	\$6 00	\$58 48	\$87 14
Tax of 1908,	4,155 71	109 20	2,285 09	1,761 42
Tax of 1909,	7,161 37	150 32	4,928 68	2,147 57
Tax of 1910,	139,044 61	1,323 84	135,283 85	5,619 71

Old taxes uncollected,				\$9,615 84
Tax of 1911 uncollected,				131,342 31

				\$140,958 15

At the tax sale on August 16, 1911, twenty-one estates were sold and tax deeds were given for seventeen of them.

VALUATION.

May 1, 1909,	\$28,534,435 90
April 1, 1910,	30,260,357 00
April 1, 1911,	32,078,117 00

	\$90,872,909 90
Average for three years,	\$30,290,969 97
Number of polls April 1, 1910,	10,552

Respectfully submitted,

HERBERT G. MORSE,

Treasurer and Collector.

Fitchburg, Mass., Nov. 30, 1911.

THIRTY-NINTH
ANNUAL REPORT
OF THE
COMMITTEE ON REDUCTION
OF CITY DEBT
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911

SINKING FUND REPORT

To the City Council :

GENTLEMEN :—The Committee on the Reduction of the City Debt, respectfully presents its report for the last fiscal year :

GENERAL SINKING FUND.

RECEIPTS.

Cash on hand Nov. 30, 1910,	\$7,262 54
City of Fitchburg bonds paid,	27,700 00
City of Fitchburg notes paid,	145,000 00
Appropriation,	2,500 00
Income,	6,234 51
	—————
	\$188,697 05

PAYMENTS

City of Fitchburg notes purchased,	\$150,000 00
City of Fitchburg bonds purchased,	34,400 00
Cash in bank,	4,297 05
	—————
	\$188,697 05
Amount of fund Nov. 30, 1910,	\$176,737 54
Gain for year,	8,734 51
	—————
Total amount of fund Nov. 30, 1911,	\$185,472 05

Invested in City of Fitchburg Securities as follows :

Bonds due June 1, 1913,	\$2,000 00
Bonds due Nov. 1, 1912,	1,000 00
Bonds due Nov. 1, 1912,	650 00
Bonds due Nov. 1, 1912,	600 00
Bonds due Nov. 1, 1912-16,	22,000 00
Bonds due April 1, 1922,	3,000 00
Bonds due June 1, 1913,	5,000 00
Bonds due April 1, 1912-14,	900 00

SINKING FUND REPORT

Bonds due June 1, 1913,	\$5,000 00
Bonds due June 1, 1914,	2,000 00
Bonds due Nov. 1, 1912,	1,000 00
Bonds due June 1, 1912-13,	2,000 00
Bonds due Nov. 1, 1916,	875 00
Bonds due Nov. 1, 1912,	4,000 00
Bonds due Oct. 1, 1912-17,	18,000 00
Bonds due Nov. 1, 1915-16,	1,950 00
Bonds due May 1, 1912-15,	6,000 00
Bonds due Nov. 1, 1912-17,	24,000 00
Bonds due Nov. 1, 1913-15,	900 00
Bonds due Nov. 1, 1916,	200 00
Bonds due Nov. 1, 1918,	100 00
Demand notes,	80,000 00
Cash in bank drawing interest,	4,297 05
	<hr/>
	\$185,472 05

SCHOOL LOAN SINKING FUND.

RECEIPTS.

Cash on hand Nov. 30, 1910,	\$12,268 24
City of Fitchburg bonds paid,	6,550 00
City of Fitchburg notes paid,	18,500 00
Appropriation,	4,500 00
Income,	4,053 37
	<hr/>
	\$45,871 61

PAYMENTS.

City of Fitchburg notes purchased,	\$40,000 00
City of Fitchburg bonds purchased,	2,000 00
Cash in bank,	3,371 61
	<hr/>
	\$45,371 61
Amount of fund Nov. 30, 1910,	\$111,593 24
Gain for the year,	8,553 37
	<hr/>
Total amount of fund Nov. 30, 1911,	\$120,146 61

Invested in City of Fitchburg securities as follows:

Bonds due June 1, 1914,	\$1,000 00
Bonds due May 1, 1923,	1,000 00
Bonds due Nov. 1, 1912,	500 00
Bonds due Nov. 1, 1912-13,	1,950 00
Bonds due Nov. 1, 1912-16,	1,625 00
Bonds due Nov. 1, 1913-16,	16,000 00
Bonds due Nov. 1, 1912-17,	7,500 00
Bonds due Nov. 1, 1917,	3,500 00
Bonds due Nov. 1, 1913-17,	2,000 00
Bonds due Nov. 1, 1912-16,	10,000 00
Bonds due Nov. 1, 1917,	1,000 00
Bonds due Nov. 1, 1918,	500 00
Bonds due Nov. 1, 1918,	2,000 00
Bonds due April 1, 1922,	5,000 00
Bonds due May 1, 1923,	8,000 00
Bonds due Oct. 1, 1913,	3,000 00
Bonds due Nov. 1, 1912-13,	1,000 00
Bonds due Nov. 1, 1912-13,	1,200 00
Bonds due July 1, 1923,	10,000 00
Demand notes,	40,000 00
Cash in bank drawing interest,	3,371 61
	—————
	\$120,146 61

SEWER LOAN SINKING FUND.

RECEIPTS.

Cash on hand Nov. 30, 1910,	\$8,784 16
City of Fitchburg bonds paid,	2,375 00
City of Fitchburg notes paid,	7,000 00
Appropriation,	1,500 00
Income,	1,049 43
	—————
	\$20,708 59

PAYMENTS.

City of Fitchburg notes purchased,	\$15,000 00
Cash in bank,	5,708 59
	—————
	\$20,708 59

Amount of fund Nov. 30, 1910,	\$31,634 16
Gain for the year,	2,549 43
Total amount of fund Nov. 30, 1911,	\$34,183 59

Invested in City of Fitchburg securities as follows:

Bonds due Oct. 1, 1912,	\$3,000 00
Bonds due Nov. 1, 1912-15,	3,500 00
Bonds due Nov. 1, 1914,	975 00
Bonds due Nov. 1, 1912-17,	6,000 00
Demand note,	15,000 00
Cash in bank drawing interest,	5,708 59
	—————
	\$34,183 59

STATE NORMAL SCHOOL LOAN SINKING FUND.

RECEIPTS.

Cash on hand Nov. 30, 1910,	\$4,425 26
City of Fitchburg bonds paid,	1,694 50
City of Fitchburg notes paid,	4,000 00
Appropriation,	800 00
Income,	615 80
	—————
	\$11,535 56

PAYMENTS.

City of Fitchburg notes purchased,	\$10,000 00
Cash in bank,	1,535 56
	—————
Amount of fund Nov. 30, 1910,	\$18,492 26
Gain for the year,	1,415 80
	—————
Total amount of fund Nov. 30, 1911,	\$19,908 06

Invested in City of Fitchburg securities as follows:

Bonds due Oct. 1, 1912-16,	\$1,222 50
Bonds due Nov. 1, 1912-14,	1,050 00
Bonds due Nov. 1, 1912,	400 00
Bonds due Nov. 1, 1912-18,	1,400 00
Bonds due Nov. 1, 1912-18,	3,500 00

Bonds due Nov. 1, 1918,	\$800 00
Demand note,	10,000 00
Cash in bank drawing interest,	1,535 56

	\$19,908 06

WATER LOAN SINKING FUND.

RECEIPTS.

Cash on hand Nov. 30, 1910,	\$968 36
City of Fitchburg bonds paid,	35,900 00
City of Fitchburg notes paid,	75,000 00
Appropriation,	16,000 00
Income,	3,884 53

	\$131,752 89

PAYMENTS.

City of Fitchburg notes purchased,	\$30,000 00
City of Fitchburg bonds purchased,	1,000 00
City of Fitchburg bonds paid,	100,000 00
Cash in bank,	752 89

	\$131,752 89

Amount of fund Nov. 30, 1910,	\$167,818 36
Gain for year account of income,	19,884 53

	\$187,702 89
Bonds paid May 1, 1911,	100,000 00

Total amount of fund Nov. 30, 1911,	\$87,702 89

Invested in City of Fitchburg securities as follows :

Bonds due May 1, 1912-16,	\$1,500 00
Bonds due Dec. 1, 1922,	12,000 00
Bonds due Nov. 1, 1912-16,	17,500 00
Bonds due Nov. 1, 1915-17,	1,050 00
Bonds due Nov. 1, 1912-16,	10,000 00
Bonds due Nov. 1, 1917,	1,000 00
Bonds due Nov. 1, 1918,	500 00
Bonds due Nov. 1, 1912-16,	10,000 00
Bonds due Nov. 1, 1917,	1,000 00

Bonds due Nov. 1, 1918,	\$1,000 00
Bonds due Nov. 1, 1912,	300 00
Bonds due Nov. 1, 1917,	100 00
Bonds due June 1, 1913,	1,000 00
Demand notes,	30,000 00
Cash in bank drawing interest,	752 89
	<hr/>
	\$87,702 89

TOTAL AMOUNT OF ALL SINKING FUNDS.

General loan sinking fund,	\$185,472 05
School loan sinking fund,	120,146 61
Sewer loan sinking fund,	34,183 59
State Normal School loan sinking fund,	19,908 06
Water loan sinking fund,	87,702 89
	<hr/>
	\$447,413 20

Respectfully submitted,

M. FRED O'CONNELL,

F. D. PAGE,

Committee on Reduction of City Debt.

HERBERT G. MORSE,

Treasurer of the Sinking Funds.

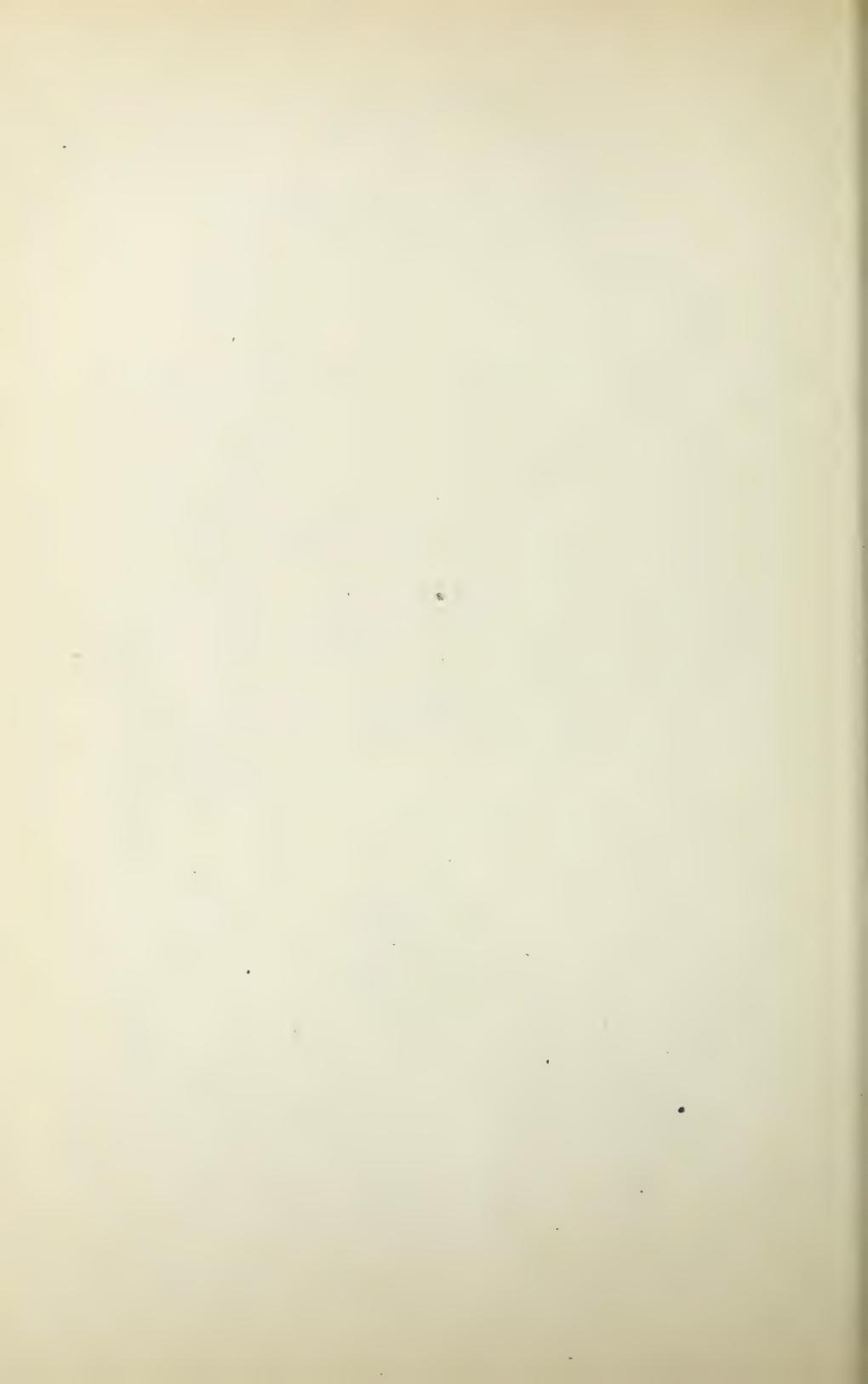
FITCHBURG, MASS., November 30, 1911.

THIRTY-NINTH
ANNUAL REPORT
OF THE
COMMITTEE ON FINANCE
OF THE
CITY OF FITCHBURG
MASSACHUSETTS

1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912



REPORT OF COMMITTEE ON FINANCE

In accordance with Section 2, Chapter 4, of the City Ordinances, we have examined and audited the accounts of the City Treasurer, and believe the same to be correct.

We herewith append a list of the securities in the City Treasurer's hands belonging to the city.

M. FRED. O'CONNELL,
JOEL JOEL,
JAMES H. SHEEHAN,
Committee on Finance.

Fitchburg, Mass., November 30, 1911.

GENERAL SINKING FUND.

City of Fitchburg securities as follows:

Bonds due June 1, 1913,	\$2,000 00
Bonds due April 1, 1912-14,	900 00
Bonds due Nov. 1, 1912,	1,000 00
Bonds due Oct. 1, 1912-17,	18,000 00
Bonds due Nov. 1, 1912,	650 00
Bonds due Nov. 1, 1912,	600 00
Bonds due June 1, 1912-13,	2,000 00
Bonds due June 1, 1913,	5,000 00
Bonds due Nov. 1, 1912-16,	22,000 00
Bonds due April 1, 1922,	3,000 00
Bonds due June 1, 1913,	5,000 00
Bonds due June 1, 1914,	2,000 00
Bonds due Nov. 1, 1912,	1,000 00
Bonds due Nov. 1, 1916,	875 00
Bonds due Nov. 1, 1912,	4,000 00
Bonds due Nov. 1, 1915-16,	1,950 00
Bonds due May 1, 1912-15,	6,000 00
Bonds due Nov. 1, 1912-17,	24,000 00
Bonds due Nov. 1, 1913-15,	900 00

Bonds due Nov. 1, 1916,	\$200 00
Bonds due Nov. 1, 1918,	100 00
Demand notes,	80,000 00
Cash in bank drawing interest,	4,297 05
	<hr/>
	\$185,472 05

SCHOOL LOAN SINKING FUND.

City of Fitchburg securities as follows:

Bonds due Nov. 1, 1912-17,	\$7,500 00
Bonds due Nov. 1, 1917,	3,500 00
Bonds due Nov. 1, 1913-17,	2,000 00
Bonds due Nov. 1, 1912-13,	1,950 00
Bonds due Nov. 1, 1912-16,	1,625 00
Bonds due April 1, 1922,	5,000 00
Bonds due May 1, 1923,	8,000 00
Bonds due July 1, 1923,	10,000 00
Bonds due Oct. 1, 1913,	3,000 00
Bonds due Nov. 1, 1912-13,	1,000 00
Bonds due Nov. 1, 1912-13,	1,200 00
Bonds due Nov. 1, 1913-16,	16,000 00
Bonds due Nov. 1, 1912-16,	10,000 00
Bonds due Nov. 1, 1917,	1,000 00
Bonds due Nov. 1, 1918,	500 00
Bonds due Nov. 1, 1918,	2,000 00
Bonds due June 1, 1914,	1,000 00
Bonds due May 1, 1923,	1,000 00
Bonds due Nov. 1, 1912,	500 00
Demand notes,	40,000 00
Cash in bank drawing interest,	3,371 61
	<hr/>
	\$120,146 61

SEWER LOAN SINKING FUND.

City of Fitchburg securities as follows:

Bonds due Nov. 1, 1914,	\$975 00
Bonds due Nov. 1, 1912-15,	3,500 00
Bonds due Oct. 1, 1912,	3,000 00
Bonds due Nov. 1, 1912-17,	6,000 00
Demand notes,	15,000 00
Cash in bank drawing interest,	5,708 59
	<hr/>
	\$34,183 59

STATE NORMAL SCHOOL LOAN SINKING FUND.

City of Fitchburg securities as follows:

Bonds due Oct. 1, 1912-16,	\$1,222 50
Bonds due Nov. 1, 1912-14,	1,050 00
Bonds due Nov. 1, 1912,	400 00
Bonds due Nov. 1, 1912-18,	1,400 00
Bonds due Nov. 1, 1912-18,	3,500 00
Bonds due Nov. 1, 1918,	800 00
Demand notes,	10,000 00
Cash in bank drawing interest,	1,535 56

	\$19,908 06

WATER LOAN SINKING FUND.

City of Fitchburg securities as follows:

Bonds due May 1, 1912-16,	\$1,500 00
Bonds due Dec. 1, 1922,	12,000 00
Bonds due Nov. 1, 1912-16,	17,500 00
Bonds due Nov. 1, 1915-17,	1,050 00
Bonds due Nov. 1, 1912-16,	10,000 00
Bonds due Nov. 1, 1917,	1,000 00
Bonds due Nov. 1, 1918,	500 00
Bonds due Nov. 1, 1912-16,	10,000 00
Bonds due Nov. 1, 1917,	1,000 00
Bonds due June 1, 1913,	1,000 00
Bonds due Nov. 1, 1918,	1,000 00
Bonds due Nov. 1, 1912,	300 00
Bonds due Nov. 1, 1917,	100 00
Demand notes,	30,000 00
Cash in bank drawing interest,	752 89

	\$87,702 89



THIRTY-NINTH
ANNUAL REPORT
OF THE
FIRE DEPARTMENT
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911

1911

Mayor, Hon. M. Fred O'Connell.

JOINT STANDING COMMITTEE ON FIRE DEPARTMENT.

Aldermen Frank H. Foss, Frank P. Allen; Councilmen
George H. Miller, James H. Sheehan, John F. McDowell.

ROSTER OF FIRE DEPARTMENT.

CHIEF ENGINEER.

T. F. MURNANE, age, 58; residence, Central Station.

ASSISTANT ENGINEERS.

Rank	Name	Age	Residence
Assistant Chief,	H. H. Wheelock,	35	28 Cherry st.
First District Chief,	J. S. Thompson,	50	157 Westminster st.
Second District Chief,	H. J. Hyatt,	40	42 Myrtle ave.

SUPERINTENDENT OF FIRE ALARM AND INSPECTOR OF WIRES.

GEORGE F. JEFTS.

PERMANENT MEN.

Rank	Name	Age	Residence
Chief Engineer,	T. F. Murnane,	58	Central sta.
Supt. Fire Alarm,	George F. Jefts,	50	48 Hartwell st.
Capt. Chemical No. 1.	G. W. Sulloway,	47	Central sta.
Act'g-Lieut. Chem. No. 1.	E. A. G. Cox,	36	Central sta.
Driver Chemical No. 1,	Solomon Poland,	59	Central sta.
Capt. Truck No. 2,	N. A. Slade,	46	Central sta.
Driver Truck No. 2,	Herbert H. Beard,	51	Central sta.
Spare Driver,	M. J. McNamara,	51	Central sta.
Spare Driver,	Joseph Cullen,	34	Oak Hill sta.
Spare Driver,	Richard Taft,	32	Factory Sq. sta.
Driver Hose Co. No. 1,	Chauncy D. Ford,	47	Summer st. sta.
Hoseman Hose Co. No. 1,	Michael J. Shea,	39	Summer st. sta.
Spare Driver,	H. N. Marshall,	37	Summer st. sta.
Capt. Truck No. 1,	W. H. Hall,	55	Summer st. sta.
Driver Truck No. 1,	J. W. Fogarty,	55	Summer st. sta.
Capt. Hose Co. No. 4,	F. E. Farrell,	42	Water st. sta.
Lieut. Hose Co. No. 4,	Thomas Mullee,	30	Water st. sta.
Driver Hose Co. No. 4,	W. F. Burke,	48	Water st. sta.
Capt. Hose Co. No. 3,	W. K. Younglove,	34	Factory sq. sta.

Rank	Name	Age	Residence
Lieut. Hose Co. No. 3,	W. M. Harley,	35	Factory sq. sta.
Driver Hose Co. No. 3,	James Leckie,	42	Factory sq. sta.
Capt. Hose Co. No. 5,	P. C. Cahill,	54	Oak Hill sta.
Hoseman Hose Co. No. 5, J. N. Fogarty,		28	Oak Hill sta.
Driver Hose Co. No. 5,	N. L. Anderson,	42	Oak Hill sta.
Spare Driver H. Co. No. 5, J. H. Shea,		40	Oak Hill sta.
Capt. Truck No. 3,	J. J. Shea,	40	Oak Hill sta.
Act'g-Lieut. Truck No. 3, Alfred Lessard,		30	Oak Hill sta.
Driver Truck No. 3,	B. O. Bradbury,	41	Oak Hill sta.
Lieut. Hose Co. No. 2,	C. R. Beer,	44	West Fitchburg sta.
Driver Hose Co. No. 2,	George W. Marston,	42	West Fitchburg sta.

OFFICERS AND MEMBERS OF CHEMICAL NO. 1.

Rank	Name	Age	Residence	Occupation
Captain,	G. W. Sulloway,	47	Central sta.,	Permanent
Acting Lieut. } and Clerk,	E. A. G. Cox,	36	Central sta.,	Permanent
Driver,	Solomon Poland,	59	Central sta.,	Permanent

ENGINEERS OF STEAMERS.

	Name	Age	Residence	Occupation
Engine No. 2, G. S. Richardson,		61	1 Lunenburg st.,	Machinist
Engine No. 3, John Woolacott,		49	94 Philips st.,	Loom-fixer

OFFICERS AND MEMBERS OF HOOK AND LADDER CO. NO. 1.

Rank	Name	Age	Residence	Occupation
Captain,	W. H. Hall,	55	Summer st. sta.,	Permanent
Lieut. and Clerk,	C. E. Woods,	43	26 Payson st.,	Machinist
	J. E. Guildford,	34	42 Myrtle ave.,	Machinist
	G. J. Conry,	29	5 Morris st.,	Machinist
	R. A. Grieve,	38	Summer st. sta.,	Teamster
	H. F. Fogerty,	25	57 Summer st.,	Clerk
	M. M. Brooks,	35	2 Joslin place,	Teamster
	H. L. Farwell,	26	Summer st. sta.,	Clerk
	Carl McLean,	25	59 Summer st.,	Printer
Driver,	J. W. Fogerty,	54	Summer st. sta.,	Permanent

OFFICERS AND MEMBERS OF HOOK AND LADDER CO. NO. 2.

Rank	Name	Age	Residence	Occupation
Captain,	N. A. Slade,	46	Central sta.,	Permanent
Lieut. and Clerk,	W. H. Peabody, J. C. Beglin, F. A. Watson, E. A. Slattery, John Healey,	40 45 41 35 28	61 Pleasant st., 62 Charles st., 5 Mt. Vernon st., Central sta., Central sta.,	Machinist Bl'cksmit Tel. Insp. Grocer Moulder
Substitute,	J. B. Cunningham,	28	20 Oliver st.,	Machinist
Driver,	H. H. Beard,	51	Central sta.,	Permanent

OFFICERS AND MEMBERS OF HOOK AND LADDER CO. NO. 3

Rank	Name	Age	Residence	Occupation
Captain	J. J. Shea,	40	Oak Hill sta.,	Permanent
Acting Lieut. and Clerk,	Alfred Lessard, Walter Hollows, James Hennessy, J. E. Antil, Patrick Barnicle, T. J. Ward, J. Mallet,	30 30 41 46 35 31 29	Oak Hill sta., 230 Plymouth st., 66 Madison st., 104 Plymouth st., 81 Cleghorn st., Oak Hill sta., 218 Fairmount st.,	Mill hand Machinist Mill hand Machinist Mill hand Mill hand
Driver,	B. O. Bradbury,	41	Oak Hill sta.,	Permanent

OFFICERS AND MEMBERS OF HOSE COMPANY NO. 1.

Rank	Name	Age	Residence	Occupation
Captain,	G. E. Frye,	49	19 Milk st.,	Machinist
Lieut. and Clerk,	J. M. Syme, A. K. Ray, T. E. Rude, C. W. Patch, J. W. Farwell, Jeremiah Moriarty, M. J. Shea,	30 33 29 27 32 29 36	42 Cedar st., 85 Walnut st., Central sta., 32 Lunenburg st., 140 Myrtle ave., Summer st. sta., Summer st. sta.,	Machinist Machinist Machinist Machinist Florist Machinist Permanent
Substitute,	E. P. Humphrey,	34	Summer st. sta.,	Machinist
Driver,	C. D. Ford,	47	Summer st. sta.,	Permanent

OFFICERS AND MEMBERS OF HOSE COMPANY NO. 2.

Rank	Name	Age	Residence	Occupation
Captain,	C. R. Beer,	66	68 Wachusett st.,	Mill hand
Lieut. and Clerk,	{ C. E. Beer, Martin Griffin, John Newcomb, George Newcomb, William Newcomb, J. E. Woods, Blair Frazier, T. J. Spring, T. J. Shea, Bernard Crosby, M. J. Godley, W. J. Leonard,	44 52 48 53 43 48 33 35 36 35 34 29	W.Fitchburg sta., 56 Phillips st., 20 Temple st., 20 Vernon ct., 53 Wachusett st., 23 Vernon st., 95 Phillips st., 95 Depot st., W. Fitchburg sta., off Cottage st., W.Fitchburg sta., W.Fitchburg sta.,	Permanent Mill hand Mill hand Mill hand Grocer Janitor Mill hand Mill hand Mill hand Mill hand Driver, George W. Marston,
Driver,	42	W.Fitchburg sta.,	Permanent	

OFFICERS AND MEMBERS OF HOSE COMPANY NO. 3.

Rank	Name	Age	Residence	Occupation
Captain,	W. K. Younglove,	34	Factory sq. sta.,	Permanent
Lieut. and Clerk,	{ W. M. Harley, Alexander Leckie, A. W. Downe, C. W. Woodward, J. S. Hawthorne, G. E. Fischer, Archie Childs, Frank McKinney,	35 34 32 40 26 25 32 38	Factory sq. sta., 17 Goddard st., 162 Bond st., 77 Arlington st., Factory sq. sta. 139 Milk st., 11 Cottage sq., 20 River st.,	Permanent Teamster Clerk Machinist Machinist Mill hand Teamster Machinist
Driver,	James Leckie,	42	Factory sq. sta.,	Permanent

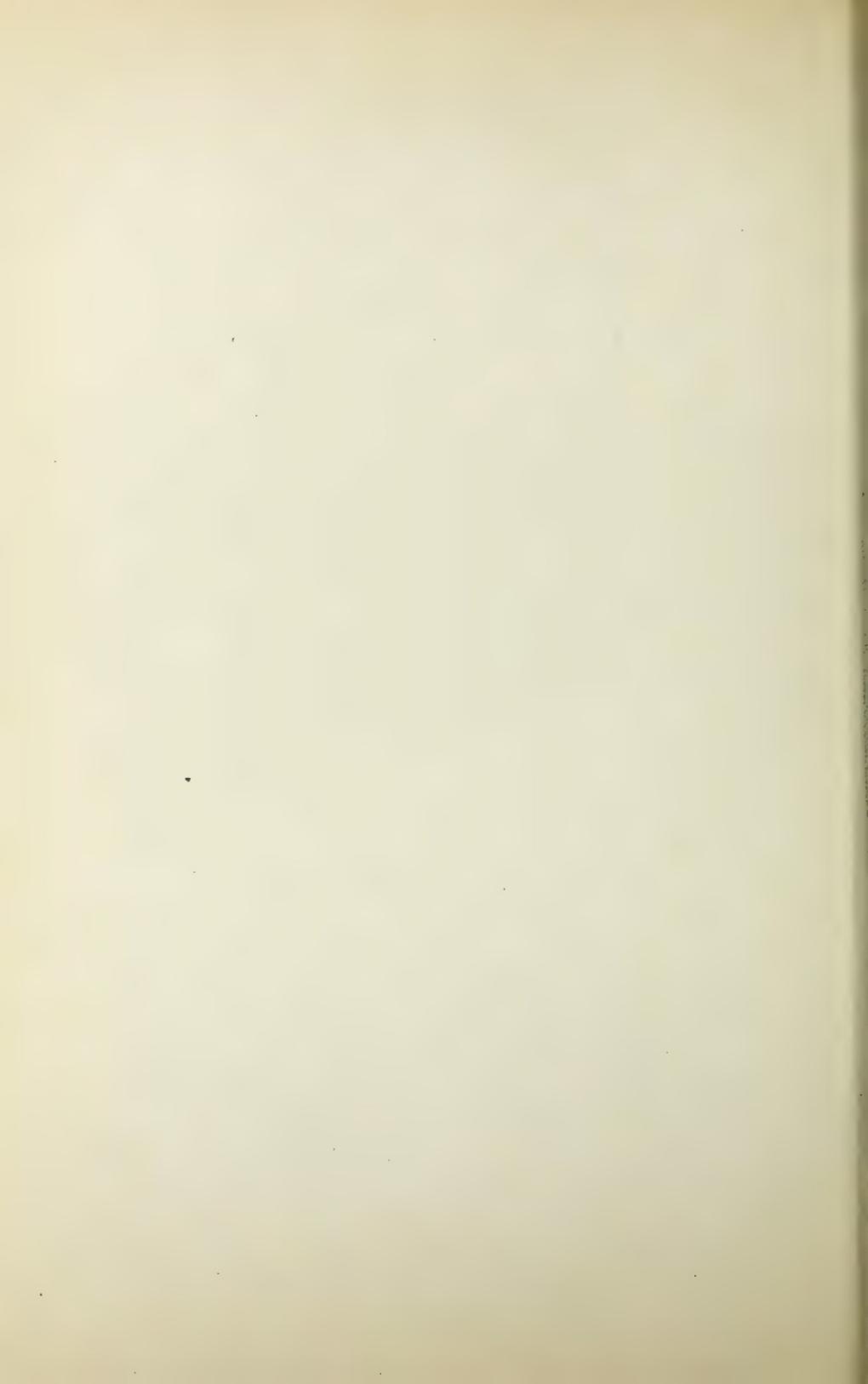
OFFICERS AND MEMBERS OF HOSE COMPANY NO. 4.

Rank	Name	Age	Residence	Occupation
Captain,	F. E. Farrell,	42	Water st. sta.,	Permanent
Lieut. and Clerk,	{ Thos. Mullee, Anthony Lavoie, J. J. O'Connor, J. E. Sullivan,	29 33 38 30	Water st. sta., 43 Salem st., 40 Middle st., Water st. sta.,	Permanent Moulder Carpenter MeterInsp.

Rank	Name	Age	Residence	Occupation
	J. R. Chaisson,	39	Charles st., East,	Bl'cksmit
	J. J. Sullivan,	30	Water st. sta.,	St'mfitter
Substitute,	A. Caulmaure,	25	223 Water st.,	Moulder
Substitute,	M. J. Flannery,	34	12 Fourth st.,	Ins. Agt.
Driver,	W. F. Burke;	48	Water st. sta.,	Permanent

OFFICERS AND MEMBERS OF HOSE COMPANY NO. 5.

Rank	Name	Age	Residence	Occupation
Captain,	P. C. Cahill,	54	Oak Hill sta.,	Permanent
Lieut. and Clerk,	Henry Perdock,	37	69 Plymouth st.,	Machinist
	Armond Lamothe,	41	187 Fairmount st.,	Mill hand
	Ignatius McInerney,	42	207 Plymouth st.,	Machinist
	George Bosley,	40	220 Fairmount st.,	Mill hand
	Thomas Gauthier,	49	212 Fairmount st.,	Mill hand
	William Berndt,	29	177 Leighton st.,	Piper
	J. N. Fogerty,	28	Oak Hill sta.,	Permanent
Driver,	N. L. Anderson,	42	Oak Hill sta.,	Permanent



REPORT OF CHIEF ENGINEER.

GENTLEMEN:—As required by ordinance, I herewith submit the report of this department for the year ending November 30, 1911, showing a statement of fires and alarms, which have occurred during the year; the probable cause of the same, the amount of loss, and insurance on property damaged as nearly as could be ascertained; and account of the receipts and expenditures for the year ending November 30, and condition of the apparatus, buildings, and other property in charge of this department.

EXPENSES, APPROPRIATIONS AND RECEIPTS.

Expenses of department for year ending	
November 30, 1911,	\$51,736 93

RECEIPTS.

Appropriation,	\$48,500 00
Receipts,	3,236 93
	—————
	\$51,736 93

This report will be found to contain statements in detail embracing the amount of expenditures, a register of the department, with age, residence and occupation of each member, a record of all fires and alarms which have occurred during the year, and the cause thereof.

Our losses still continue small in comparison to the property endangered, and the larger number of alarms have greatly added to the work of the department, and more or less wear to the apparatus. Chimney fires in buildings, and fires where no loss is sustained are not figured in the amount at risk unless insurance is paid on buildings or contents, or where damage results from fire.

It will be seen by the tables given in this report that a large per cent of the fires are put out by chemicals, or without

the use of water. This can be accomplished only by very quick response by the department. It must not be considered that all fires can be controlled by small chemical streams, and for that reason the heavy fire-fighting apparatus must be maintained and kept in the best possible condition to meet the emergency that is bound to come.

I would earnestly recommend that all new purchases of apparatus be of the automobile type. Too much cannot be said for rubber tires on fire apparatus as it saves the wear and tear, also making the same more safe on our slippery streets in icy weather. I should recommend that from time to time, as apparatus needs repairing, that rubber tires be added to them. The apparatus as a whole is in very good condition.

A combination motor driven car has been ordered from the La France Engine Company of Elmira, N. Y. The same to carry forty gallons of chemical, and one thousand feet of hose, and other necessary tools, to be delivered the last part of March, 1912. It will be necessary to have permanent men man this car, as it will answer all bell, telephone and still alarms from all parts of the city.

Two new permanent men have been added to the department this year. I believe that additional permanent men should be added to the department each year to keep up its efficiency. I find that year after year it becomes more difficult to get call men, partly on account of generally advanced wages, and the objection of employers to men leaving their work to attend fires. The placing of call men under Civil Service rules in this city has had a tendency to keep many good men out, as they object to an examination for so small compensation received.

On account of the quick response of apparatus to fires very few call men and substitutes are able to answer with the apparatus, therefore the dependency is first placed on our permanent men. The time is not far distant when all fires will have to be handled by the permanent force. In portions of this city it has been impossible to get men for the service. I would, therefore, recommend a moderate increase in the permanent force, and a corresponding decrease in the call.

FIRE RECORD.

The number of fires responded to during the past year was 250. Bell alarms, 88; telephones, 133; still alarms, 29. A gain of 23 over last year.

FIRE ALARMS EACH MONTH.

December, 19; January, 20; February, 8; March, 18; April, 74; May, 41; June, 9; July, 21; August, 15; September, 4; October, 8; November, 13.

FIRE ALARMS EACH DAY OF THE WEEK.

Monday, 34; Tuesday, 38; Wednesday, 46; Thursday, 35; Friday, 31; Saturday, 34; Sunday, 32.

In performing this service the department has traveled 914 miles, laid 23,550 feet of 2½ inch hose, raised 1,664 feet of ladders, charged 35 chemical tanks, used 2,137 gallons of chemical, used 324 pony extinguishers. Time of service at fires, 236 hours, 35 minutes.

LOSS, INSURANCE AND VALUATION OF PROPERTIES FROM DEC. 1, 1910, TO DEC. 1, 1911.

Valuation of buildings,	\$826,325 86
Valuation of contents,	1,235,857 69
Insurance on buildings,	561,800 00
Insurance on contents,	871,650 00
Loss on buildings,	21,912 64
Loss on contents,	25,723 36
Insurance paid on buildings,	15,834 64
Insurance paid on contents,	24,638 36
Total insurance paid,	40,473 00
Loss in excess of insurance paid,	7,163 00

CAUSES OF FIRES.

Brush fires, 74; chimney fires, 67; burning grass, 10; children and matches, 11; spontaneous combustion, 8; burning rubbish, 7; explosion of kerosene lamps, 7; careless smokers, 8; sparks from locomotives, 5; false alarms, 5; unknown, 4;

overheated stoves, 4; hot ashes in wooden barrels, 3; explosion of kerosene stoves, 3; boiling fat, 2; sparks, cupola, 2; overheated furnace, 2; careless use of gasolene, 2; defective lantern, 2; sparks from portable engine, 2; lightning, 2; gas lamp, 1; fireworks, 1; rats and matches, 1; alcohol, 1; oily rags, 1; fire box, 1; burning leaves, 1; stove polish, 1; snap matches, 1; core oven, 1; burning caterpillars, 1.

BUILDINGS—HOW OCCUPIED.

Dwellings, 93; business blocks, 19; store houses, 5; club houses, 3; iron foundries, 3; hotels, 2; green houses, 2; school houses, 2; automobiles, 2; comb factory, 1; yarn mill, 1; gingham mill, 1; railroad car, 1; lumber mill, 1; coal shed, 1; shoe factory, 1; cotton mill, 1; theatre, 1; garage, 1.

SALARIES OF MEMBERS OF FIRE DEPARTMENT.

Chief engineer,	\$1,500 00 per annum
Assistant chief,	275 00 " "
First district chief,	225 00 " "
Second district chief,	225 00 " "
Superintendent of fire alarms,	1,200 00 " "
Call captains,	160 00 " "
Call lieutenants,	155 00 " "
Call privates,	150 00 " "
Call engineers of steamers,	150 00 " "
Permanent captains,	2 75 per day
Permanent lieutenants,	2 70 " "
Permanent privates,	2 65 " "

MEMBERSHIP OF DEPARTMENT DEC. 1, 1911.

Permanent force—Chief engineer and fire inspector, 1; superintendent of fire alarm and inspector of wires, 1; captains, 7; lieutenants and clerks, 5; driver of hose wagon, 5; driver of chemical wagon, 1; driver of hook and ladder trucks, 3; hosemen, 3; laddermen, 2; spare drivers, 3.

Call force—Assistant engineers, 3; captains, 2; lieutenants and clerks, 4; engineers of steamers, 2; hosemen and laddermen, 57.

APPARATUS.

The apparatus in this department in active service consists of a 40-horse power, water-cooled Knox automobile for use of the chief, 1 chemical engine, 1 aerial and 2 city hook and ladder trucks, 3 two-horse hose wagons, 2 combination hose and chemical wagons, 1 combination hose and ladder wagon, 2 rubber-tired buggies, 2 steamers, 6 exercise wagons, 1 line repair wagon.

Hose Companies Nos. 3, 4 and 5 have been equipped with rubber tires the past year and are giving the best of satisfaction.

HOSE.

The department has in service 14,000 feet of two and one-half inch rubber-lined hose, which is in very good condition. There is still some very old hose in the department, and I would recommend that from year to year we purchase a thousand feet or so, so as to bring our supply of hose to a standard which would enable us to cope with a conflagration, should we be so unfortunate as to have one visit us. Under our new system of high service the old hose is not capable of standing the pressure brought to bear on it.

HORSES.

We have now in service twenty horses, the same as last year. Only one horse has been purchased the last year. At least four horses should be purchased the coming year for the purpose of taking the places of such horses as have, for various causes, become unfit for further use in the department.

BUILDINGS.

The needs of the department have been well looked after by the Inspector of Buildings, and as a whole are in good condition, and only the ordinary repairs will be needed at the different stations the coming year.

The situation remains the same at the Water Street station. Some means should be taken to keep the surface water from going under this station, there never having been a cellar, and the water stands under the building continually, causing damp-

ness and a general unsatisfactory condition, and I hope something will be done during the coming year in relation to this matter.

FIREMEN'S RELIEF ASSOCIATION.

This association, composed only of active members of the department, affords assistance to any of its members who may be so unfortunate as to be injured in the discharge of their duties as firemen, and is supported by annual assessments of its members, an occasional ball, and by donations from our citizens who approve its object.

Officers for the year: President, H. H. Wheelock; Vice-President, W. H. Peabody; Treasurer, T. F. Murnane; Secretary, J. E. Woods; Board of Directors, T. E. Rude, R. E. Grieve, J. J. O'Connor, Archie Childs, Moise Adams, Patrick Barnicle, George W. Sulloway, at large George F. Jefts.

INSPECTION OF BUILDINGS.

This part of my duties has been kept up and had a good effect in keeping rubbish and many other causes of fire well in the minds of owners and tenants, for during my tours of inspection this year I find a marked improvement. I have endeavored to attend to this, with the limited amount of time at my command, to the best of my ability. I have visited hotels, theatres, and large mercantile buildings, and ordered changes made to better safeguard the public. The moving picture hazard is one that has been given considerable attention. The theatres are as nearly safe as it can be possible to make them. I have found in a number of cases, however, that the owners and tenants of premises in bad condition allow them to become so again after having placed them in good condition.

USE OF KEROSENE, CHIMNEY FIRES, MATCHES, BRUSH AND BONFIRES, AND UNKNOWN.

USE OF KEROSENE AND GASOLENE.—Fourteen from these causes occurred during the year. Greater care should be exercised. Never leave the premises while a kerosene lamp or stove is burning. No comment can be made that will add to

the horror of this sacrifice, or to the responsibility of those whose duty it is to render such occurrences impossible.

CHIMNEY FIRES.—There were sixty-seven chimney fires last year. Tenants should require all chimneys to be cleaned out before setting up their stoves, and owners of buildings should see that the chimneys are cleaned out at least once a year.

MATCHES.—Eleven were directly traceable to this cause. Matches should be kept in metal receptacles, entirely out of the reach of children. Burned matches should always be cared for and not thrown around. Smokers should observe this.

BRUSH FIRES.—Seventy-four calls were received on account of brush fires. Most of them would seemingly be traceable to matches or carelessness on the part of the numberless people who go into the woods on Sundays. Children should not be allowed to carry matches to the woods with them, and smokers should be sure they set no fires when matches, cigars or cigarettes are thrown down. Proper care in this respect would save many needless runs.

UNKNOWN.—Four fires have been from unknown causes. The number of fires criminally caused, either by design or through carelessness is not known. Here is an opportunity for parents, merchants, manufacturers and citizens generally, to save themselves while serving the community. Rubbish and inflammable materials should be carefully cared for. Carelessness should be watched and prevented. The taxpayer must, in the end, pay the losses, whatever the amount, and every taxpayer is therefore interested in producing better results.

CONCLUSION.

In conclusion I would say that without the hearty support and co-operation of the officers and men of this department the position of chief would indeed be a thankless one and barren of results; but I am pleased in this place to say that I have received that support to a superlative degree.

I congratulate the department on its promptness in answering alarms, and I consider the absence of large fires due to this fact.

The service of this department demands that the highest possible standard of efficiency be required, that the apparatus

and appliances be modern, and that the size of the department increase in proportion to the growth of the city. The prompt and close attention to duty of both officers and men during the past year has enabled the department to perform its duty in a satisfactory manner.

I wish to extend my sincere thanks to His Honor, the Mayor, and to the city council for the many favors granted, and the courtesy shown me at all times. I also desire to thank the committee of the Fire Department for their hearty co-operation and for the interest they have manifested in the well-being of the department, to the Board of Engineers, officers and men for their willing and able support at all times, to the Police Department for their excellent service at fires, and to all others who have in any way contributed to our success.

Very respectfully, your obedient servant,
T. F. MURNANE,
Chief Engineer.

REPORT OF SUPERINTENDENT OF FIRE ALARM TELEGRAPH AND INSPECTOR OF WIRES.

To His Honor, the Mayor, and Members of the City Council:

GENTLEMEN:—I herewith submit my fourth annual report. Our fire alarm system is the same as last year, six circuits automatic, and to which are attached eighty-six signal boxes, four of which are private. Twenty-four are of old style weight. During the year two of the twenty-four have been remodelled and made over as nearly modern as possible, but still they are far from being as up-to-date as we would like. We have fifty-eight gongs of various makes, seven indicators, six bell strikers, one steam whistle, five automatic electric light switches, and five door trips, divided between the different circuits, and controlled by a six-circuit automatic repeater, these being supplied with current from our storage battery of three hundred and sixty-eight cells. Of our eighty-six signal boxes two have been added during the past year, 511 corner of Buttrick avenue and Pearl street, and 852 corner of Madison street and Franklin road. These two boxes were formerly 36 and 49 respectively, and the present 36 and 49 are of the latest type of non-interfering Gamewell make. We have bought, and it will soon be installed a new ten-circuit slate charging board made by the Gamewell Fire Alarm Telegraph Company.

WIRES.

During the year we have added 1.7 miles of new and renewed about two miles of old, making a total of 46.65 miles of No. 9 bare iron wire. Our underground consists of the same as last year, 18,561 feet of No. 14 rubber covered double braid copper. During the year all the boxes transmitted their numbers correctly. One box (46) was burned out by being crossed with the 6600 volt transmission line.

INSPECTION OF WIRES.

Number of installations inspected,	476
Number of inspections,	732
Number of defects noticed,	252
Number of approval slips signed,	396

The work of inspection of wires has been nearly the same as last year with a few exceptions. The new installations have been of very good workmanship, and of the 476 installations inspected three were condemned and seven required quite a lot of changes to conform to the rules of the insurance exchange.

In conclusion I will say that the fire alarm system has given good satisfaction during the past year, and the coming year will require the usual amount of changes to keep the lines as far from the electric light and transmission lines as possible.

Respectfully submitted,

G. F. JEFTS,
Supt. Fire Alarm Tel. and Inspector of Wires.

THIRTY-NINTH
ANNUAL REPORT
OF THE
WATER COMMISSIONERS
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911

BOARD OF WATER COMMISSIONERS.

ARTHUR A. TRAIN,	Term expires 1912
THOMAS C. SHELDON,	Term expires 1913
JAMES A. SMITH,	Term expires 1914

OFFICERS.

ARTHUR A. TRAIN,	President
A. W. F. BROWN, Supt. and Registrar,	Clerk

WATER COMMISSIONERS' REPORT

FITCHBURG, MASS., Dec. 1, 1911.

To His Honor the Mayor, and the City Council:

GENTLEMEN:—The Board of Water Commissioners respectfully submit their thirty-ninth annual report for the year ending Nov. 30, 1911.

EXTENSION OF WATER MAINS.

Allen street,	298 feet of 8 inch pipe
Central avenue,	1,917 feet of 6 inch pipe
Cliff street,	310 feet of 6 inch pipe
Franklin road,	360 feet of 6 inch pipe
Green street,	772 feet of 8 inch pipe
Henry street,	219 feet of 6 inch pipe
Kimball road,	386 feet of 6 inch pipe
Huron street,	250 feet of 8 inch pipe
Marion street,	116 feet of 6 inch pipe
Marshall road,	1,434 feet of 6 inch pipe
Maverick street,	97 feet of 6 inch pipe
Oakdale avenue,	139 feet of 6 inch pipe
Pinard avenue,	220 feet of 6 inch pipe
Roosevelt street,	290 feet of 6 inch pipe
Ross street,	233 feet of 6 inch pipe
Salome street,	400 feet of 6 inch pipe
Schaeffer street,	170 feet of 6 inch pipe
Valdalia avenue,	475 feet of 6 inch pipe
Warner avenue,	222 feet of 8 inch pipe
Westminster Hill road,	1,454 feet of 6 inch pipe
Total extensions, 9,762 feet.	
Total length of mains, 79.94 miles.	

In improving the fire service in Cleghorn district 86 feet of 6 inch pipe was replaced by the same amount of 16 inch, and 137 feet of 4 inch by same amount of 10 inch pipe.

HYDRANTS.

Twenty-two additional hydrants have been set by the city.
Total number of hydrants owned by the city 573.

Four additional hydrants have been set for private parties.
Total number of hydrants owned by private parties 119.

SERVICE PIPES.

The street mains have been tapped in 177 places, making the total number of taps to date 5,339; 8,782 feet of service pipe have been laid, of which 4,168 feet have been charged to the city and 4,614 to the water takers.

Total amount of service pipe now in use is 57.62 miles, the city owning 174,781 feet and the water takers 129,684 feet.

RAINFALL.

Table showing the amount of rainfall for the last twelve months, kindly furnished by Dr. Jabez Fisher:

		Inches		Inches
December,	1910,	1.95	June,	1911,
January,	1911,	2.54	July,	"
February,	"	2.09	August,	"
March,	"	3.45	September,	"
April,	"	1.66	October,	"
May,	"	1.16	November,	"

Total rainfall 36.31 inches; average rainfall 42 inches; thus 1911 is 5.69 inches below the average.

The rainfall has been the smallest of any year since 1884, except that of 1894, and the average of the last four is only 36.71 inches, so the summer season found the reservoirs lower than for many years.

As a matter of record we give the total rainfall for each year since the works were built in 1872. Water was pumped from the McTaggart mill pond in 1876 and was used through connections with the Snow mill pond in 1880, 1881 and 1883.

Year	Inches	Year	Inches
1873	38.21	1893	44.65
1874	36.65	1894	34.80
1875	42.	1895	44.75
1876	36.95	1896	41.48
1877	36.91	1897	46.56
1878	41.69	1898	59.28
1879	41.81	1899	38.55
1880	34.72	1900	48.68
1881	31.47	1901	49.28
1882	35.89	1902	49.37
1883	26.95	1903	49.75
1884	33.22	1904	42.12
1885	40.12	1905	42.39
1886	44.98	1906	44.91
1887	55.78	1907	45.03
1888	58.28	1908	36.87
1889	47.93	1909	37.24
1890	51.36	1910	36.41
1891	45.03	1911	36.31
1892	45.11		

FUNDED WATER DEBT.

Bonds, 4 per cent, due April 1, 1922,	\$300,000 00
3½ per cent, due Dec. 1, 1922,	12,000 00
3½ per cent, due July 1, 1923,	10,000 00
3½ per cent, due July 1, 1926,	45,000 00
Loan for Wachusett extension,	75,000 00
Bonds, 4 per cent, due Nov. 1, 1930,	5,000 00
issued in 1909,	19,000 00
Loan of 1910,	17,000 00
1911,	1,000 00
	—————
Present value of sinking fund,	\$484,000 00
	—————
Net water debt,	\$396,279 11

VALUE OF WATER FURNISHED THE CITY.

Schoolhouses,	\$3,150 00
Motor, Day street school,	350 00
Salem street school,	250 00
East street school,	250 00
South street school,	250 00
Ashburnham street school,	250 00
3 motors, Clarendon street school,	400 00
Normal schools,	500 00
3 motors, old High school,	500 00
Engine and hose houses,	500 00
Police stations,	162 00
City hall,	400 00
Wallace library,	100 00
Almshouse buildings,	150 00
Burbank hospital buildings,	200 00
City stables and motor,	100 00
Sewer department, flushing sewers,	250 00
Cemeteries, 123 hose connections,	615 00
Parks, fountains, etc.,	885 00
Eight cold water drinking fountains,	800 00
Seventy-three water carts posts,	7,300 00
688 fire hydrants,	30,960 00
Value of water furnished the city,	————— \$48,322 00

EXPENDED.

Paid pay rolls,	\$33,589 17
Pipe and fittings,	9,619 63
Hydrants and valves,	1,806 48
Castings,	1,012 91
Freight and express,	1,192 77
Lead and packing,	1,136 33
Meters and repairs,	10,039 50
Hardware, tools, etc.,	711 77
Harness repairs, stable supplies,	702 70
Electric supplies,	4 00
Rubber boots,	204 50
Coal,	19 81
Office and shop expenses,	960 87

General maintenance,	\$1,136 73
Lumber,	122 95
Blacksmithing,	3 25
Paints and oil,	20 09
Telephones,	39 54
Lighting at shop,	59 69
Other city departments,	131 20
Taxes,	309 78
New auto and expenses,	2,920 67
Supt. and Registrar's salary,	1,800 00
Commissioners' and Clerk's salary,	400 00
	—————
	\$67,944 34

CREDIT.

By cash received for service pipe,	\$11,321 46
Due for service pipe,	3,683 90
	—————
	\$15,005 36
Less amount due Nov. 30, 1910,	1,587 32
	—————
	\$13,418 04
Net maintenance,	\$54,526 30
Transferred to city treasury,	28,663 70
	—————
	\$83,190 00

Early in the year the City Council voted to expend \$3,000 from the water receipts each year for the purchase of the meters belonging to private takers, and \$3,000 to install meters on the old unmetered services.

Thus in nine years all meters will belong to the city, and in less than five years all services will be metered.

One thousand feet of 24-inch cast iron pipe was purchased to replace that amount of the 24-inch brick conduit between Overlook reservoir and Scott reservoir but has not been laid.

The pump bought last December was installed at Wachusett lake, started up August 24th and ran till November 15th, pumping 130,000,000 gallons of water into the high service. The cost of pumping plant ready to run was \$2,044.65 and cost of operating to November 15th, \$921.15. If operated another year there would be only the cost of the running expenses.

Since November 15th the water in the reservoirs has slowly gained so that now there is a supply for the winter.

The shortage of water for the past summer showed that a larger storage capacity was necessary, and your commissioners are looking into the possibilities for that and will report later on whatever scheme seem best to them.

There is now before the City Council an order to replace the water motors in the schools with electric motors, and we hope that it will be passed as that will save over 300,000 gallons of water each school day.

A 16-inch Venturi meter has been placed on the Falulah line, metering all water for the low service and a 20-inch Venturi meter is connected to the Westminster line at the "Narrows" to meter all of the high service supplied from that source. Both meters are installed in brick and concrete houses and will be of great help in conserving the water supply.

Through the State Forester we obtained 20,000 white pine seedlings, and in April these were planted on the watersheds of Scott and Falulah reservoirs and Meetinghouse pond. Considering the dry season these have done very well and we hope to continue this work another year.

SUMMARY OF STATISTICS.

FITCHBURG WATER WORKS.

WORCESTER COUNTY, MASS.

Population by census of 1910, 37,000.

Date of construction, 1873.

By whom constructed, City of Fitchburg.

Source of supply, storage reservoirs.

Mode of supply, gravity.

FINANCIAL ACCOUNT.

From water consumers :

Water rates, schedule,	\$8,221 97
Water rates, meter,	74,968 03
Service pipe,	13,418 04

	\$96,608 04

EXPENDITURES.

Management, repairs and extensions,	\$67,944 34
Transferred to city treasury,	28,663 70

	\$96 608 04
Net cost of works to date,	\$1,279,092 41
Net bonded debt to date,	396,279 11
Bonded debt,	484,000 00
Present value of sinking fund,	87,702 89

DISTRIBUTION.

Kinds of pipe used, wrought iron, cement lined and cast iron.

Size,	2 to 30 inches
Extended,	9,762 feet
Number of miles in use,	97.94 miles
Hydrants added,	26
Hydrants now in use,	692
Valves added,	26

Number now in use, 780

Average pressure at city hall:

High service, 150 pounds

Low service, 80 pounds

SERVICES.

Kind of pipe used, wrought iron, cement lined and cast iron.

Size, $\frac{3}{4}$ inch to 10 inches

Service taps added, 177

Number now in use, 5,339

Meters added, 376

Meters now in use, 4,001

Motors and elevators added, 1

Number now in use, 121

Respectfully submitted,

A. A. TRAIN,

THOMAS C. SHELDON,

JAMES A. SMITH,

Water Commissioners.

REPORT OF WATER REGISTRAR.

FITCHBURG, MASS., Dec. 1, 1911.

To the Honorable Board of Water Commissioners:

GENTLEMEN:—I respectfully submit the annual statement of my accounts as Water Registrar for the year ending November 30, 1911:

Received from metered water,	\$72,899 19
Received from water rates,	8,497 62
	—————
Received from service pipe,	11,321 46
	—————
	\$92,718 27

CONTRA.

Paid cash to City Treasurer,	\$92,718 27
------------------------------	-------------

The following amounts are due this department:

From metered water,	\$6,539 90
From water rates,	1,388 14
	—————
From service pipe,	3,683 90
	—————
	\$11,611 94
Cash receipts from water,	\$81,396 81
Amount due for water,	7,928 04
	—————
	\$89,324 85
Less amount due Nov. 30, 1910,	6,134 85
	—————
Receipts for the year 1911,	\$83,190 00

CONTRA.

Maintenance,	\$54,526 30
Transferred to City Treasury,	28,663 70
	—————
	\$83,190 00

The ten per cent discount amounted to \$8,324.31 for the year.

The number of meters in use is 4,001, all of which belong to the city under the order passed this year, buying back the meters owned by private parties.

Analysis of the water in Scott, Meetinghouse pond and Wachusett lake will be found on the pages following this.

I tender my thanks to your honorable board for the kindness and assistance shown me at all times, in performing the duties of this office.

Respectfully submitted,

A. W. F. BROWN,
Water Registrar.

COMMONWEALTH OF MASSACHUSETTS

WATER ANALYSIS
(Parts in 100,000)

Number	DATE OF		APPEARANCE			ODOR	
	Collection	Examination	Turbidity	Sediment	Color	Cold	Hot
	1911	1911					
90486	Jan. 17	Jan. 23	None	Very slight	.20	Faintly vegetable and unpleasant	Faintly vegetable and unpleasant
90487	Jan. 18	Jan. 23	Very slight	Slight	.08	Very faintly vegetable	Faintly vegetable
90488	Jan. 17	Jan. 23	Slight	Slight	.11	Very faintly vegetable	Faintly vegetable
91636	Mar. 27	Mar. 28	Slight	Slight	.10	Very faintly vegetable	Very faintly vegetable faintly fishy
91637	Mar. 27	Mar. 28	Slight	Slight	.24	Very faintly vegetable	Faintly vegetable
91638	Mar. 27	Mar. 28	Very slight	Slight	.04	Very faintly vegetable	Very faintly vegetable
92501	May 15	May 16	Very slight	Very slight	.10	Very faintly unpleasant	Faintly unpleasant
92502	May 15	May 16	Slight	Slight	.19	Very faintly unpleasant	Faintly unpleasant
92503	May 15	May 16	Very slight	Very slight	.10	Very faintly unpleasant	Faintly unpleasant
93908	July 18	July 20	Slight	Slight	.10	Faintly vegetable and unpleasant	Faintly vegetable and unpleasant
93909	July 18	July 20	Slight	Slight	.16	Very faintly vegetable	Very faintly vegetable
93910	July 18	July 20	Slight	Slight	.16	Very faintly vegetable	Very faintly vegetable
95280	Sept. 19	Sept. 21	None	Very slight	.00	None	None
95281	Sept. 19	Sept. 21	Slight	Considerable	.10	None	Very faintly vegetable
95282	Sept. 19	Sept. 21	Slight	Heavy, earthy	.09	Faintly unpleasant	Distinctly unpleasant

—STATE BOARD OF HEALTH.

FITCHBURG.

(Parts in 100,000)

Number	RESIDUE ON EVAPORA- TION			AMMONIA			Chlorine	NITROGEN AS		Oxygen consumed	Hardness	Iron					
				Albuminoid													
	Total	Loss on Ignition	Fixed	Free	Total	In So- lution	In Sus- pension	Nitrates	Nitrites								
90486	3.50	1.10	2.40	.0018	.0086	.0082	.0004	.28	.0070	.0000	.22	1.3	.0180	Meeting- house Pond			
90487	4.50	1.95	2.55	.0010	.0080	.0060	.0002	.37	.0200	.0000	.14	1.3	.0050	Scott Reservoir			
90488	3.10	1.20	1.90	.0020	.0150	.0108	.0042	.24	.0000	.0000	.16	0.8	.0220	Wachusett Lake			
91636	3.00	1.10	1.90	.0044	.0178	.0146	.0032	.17	.0020	.0001	.25	0.8	.0140	Meeting- house Pond			
91637	2.65	1.25	1.40	.0042	.0302	.0180	.0122	.18	.0030	.0001	.51	0.5	.0060	Scott Reservoir			
91638	2.50	1.00	1.50	.0038	.0112	.0098	.0014	.16	.0010	.0000	.16	0.8	.0140	Wachusett Lake			
92501	3.35	1.00	2.35	.0028	.0244	.0228	.0016	.22	.0010	.0000	.26	0.8	.0030	Meeting- house Pond			
92502	3.20	1.20	2.00	.0016	.0286	.0204	.0082	.24	.0000	.0000	.35	0.5	.0090	Scott Reservoir			
92503	2.55	1.05	1.50	.0018	.0178	.0154	.0024	.19	.0010	.0000	.18	0.5	.0070	Wachusett Lake			
93908	4.05	1.45	2.60	.0022	.0160	.0106	.0054	.19	.0000	.0000	.15	1.0	.0080	Meeting- house Pond			
93909	4.00	2.00	2.00	.0044	.0200	.0166	.0034	.27	.0000	.0000	.36	0.6	.0080	Scott Reservoir			
93910	3.50	1.55	1.95	.0074	.0176	.0132	.0044	.20	.0000	.0000	.21	0.8	.0420	Wachusett Lake			
95280	2.95	1.00	1.95	.0018	.0156	.0134	.0022	.21	.0000	.0000	.15	0.6	.0050	Meeting- house Pond			
95281	3.65	1.85	1.80	.0034	.0280	.0204	.0076	.25	.0000	.0000	.28	0.5	.0250	Scott Reservoir			
95282	3.10	1.10	2.00	.0060	.0650	.0146	.0504	.19	.0000	.0000	.20	0.6	.2100	Wachusett Lake			



THIRTY-NINTH
ANNUAL REPORT
OF THE
CITY ENGINEER
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912

CITY ENGINEERS.

SINCE THE INCORPORATION OF THE CITY, WITH TERM OF SERVICE OF EACH.

George Raymond,	January 6, 1873, to April 1, 1875
Thomas C. Sheldon,	April 1, 1875, to May 18, 1880
Thomas C. Lovell,	May 18, 1880, to April 6, 1891
David A. Hartwell,	April 6, 1891, to Nov. 30, 1910
Timothy J. Sheehan,	Nov. 30, 1910, to date

CITY ENGINEERING DEPARTMENT.

The following persons have been employed during the year in this department:

CITY ENGINEER.

TIMOTHY J. SHEEHAN.

ASSISTANTS.

HERMAN S. CUSHING,	WILLIAM K. BAILEY,
IRVING R. KENDALL,	FOSTER BAILEY,
GIFFORD HARTWELL,	JOSEPH CROWLEY,
EDWARD W. TANDY.	

STENOGRAPHER AND TYPEWRITER.

ANNIE C. O'DEA.

REPORT OF CITY ENGINEER.

CITY ENGINEER'S OFFICE, December, 1911.

To the Honorable City Council:

GENTLEMEN:—In compliance with the city ordinance, I respectfully submit the thirty-ninth annual report of the department of city engineering for the year ending November 30, 1911.

HIGHWAYS.

Ten orders have been adopted by the City Council, laying out the following streets and ways:

Name of Street	LOCATION	Width in feet	Length in feet
Clifton.....	Walton to Mt. Elam road.....	40	697.8
Columbus.....	Fairmount to Plymouth.....	40	292.06
Elizabeth.....	South to Crown	50	835.17
Francis.....	Charles to Thomas.....	40	303
Gage Street place.	Gage northerly	20	135
Gardner road.....	Upland northerly.....	40	464
Maverick.....	Summer to Boutelle.....	40	595.3
Omena place.....	Johnson southerly.....	25	420.3
Redman place.....	Lunenburg northerly.....	20	574.27
Thorndike.....	Klondike avenue to Merrill.....	40	881.5

The extension of Broad street, from Cushing street to River street, was the most important matter which received consideration during the past year.

The Sewage Disposal Commission presented a petition to the City Council on June 20, requesting that consideration be given the question of the advisability of laying out Broad street. During the summer this proposition was discussed by the Joint Standing Committees on Highways and Finance to whom it was referred, and in their report they recommended that a joint convention be held in the Common Council room, City Hall, for the purpose of giving the Sewage Disposal Commissioners and

all the citizens interested a chance to be heard upon this important public question. The convention was held on Oct. 10, 1911, and the Sewage Disposal Commissioners advanced the following reasons for the construction of the street in so far as it affected the location of the main intercepting sewer west of Putnam street. (1) The street is the best location for the main intercepting sewer. (2) Consulting Engineers Barnes and Coffin in their reports upon the disposal of the sewage of this city, recommended that the main intercepting sewer be laid in Broad street. (3) Consulting Engineer Eddy and Chief Engineer Hartwell believe that this street is the only practical location for the main intercepting sewer. (4) It would be better financial policy for the city to construct this street than to take an easement for this purpose in this location, as the damages for the taking of an easement would be heavy. The principal reasons advanced other than engineering ones, which to my mind deserve the consideration of all, as they are advanced to provide for the future development of our city are as follows: (1) This street would divert travel at River street, which was going in the direction of Lunenburg, and Wards five and six of this city, thereby relieving the traffic from Main street, which is congested at times. (2) Open up a business street, between Main street and the river, which could be developed into a mercantile street. (3) This new street would be parallel with Main street and the distance between River street and the Depot would be about 300 feet less than by the present Main street route. The grades could be made very light. (4) The city would derive a great benefit in the future development of the territory laying on both sides of this street by the increase in taxable property. The chief objection to the laying out of this street is the financial burden which it would occasion the city. The cost of construction and the land damages will be heavy. However, the benefits which will be derived by the abutters in the opening up of this street are, to my mind, so great that they should in a measure offset the damages sustained.

The result of this convention was a recommendation that the petition be referred back to the Joint Committees on Highways and Finance. After consideration at a meeting of the joint committees a recommendation was prepared and presented to the City Council on Nov. 28, 1911. This recommendation

is as follows : That the petition be referred to the Committee on Highways, the City Engineer be instructed to prepare plans and estimate the cost of construction and the Finance Committee act as a special committee to ascertain an estimate of the land damages.

The work of making surveys is being done at present. When this work is completed plans will be prepared and estimate of the construction work furnished the City Council.

Surveys, working plans and profiles were made for the streets enumerated in the table of new streets and during the winter months record plans to file for reference will be completed. Street betterment assessments to the amount of \$915.81 were levied during the year. The length of new streets accepted amounted to 5,198.4 ft. or .98 of a mile, which in addition to streets previously accepted makes a total of approximately 136.91 miles.

The following table shows the length of new streets laid out each year during the past twenty-one years, and also the number of miles of public streets or ways at the close of each year :

Year	New Streets in feet	New Streets in miles	Miles of Public ways
1891	7,450	1.41	119.00
1892	4,563	.86	119.86
1893	8,557	1.62	121.48
1894	12,530	2.37	123.85
1895	1,388	.26	124.11
1896	3,620	.69	124.80
1897	2,998	.57	125.37
1898	4,354	.82	126.19
1899	8,436	1.60	127.79
1900	2,002	.38	128.17
1901	10,819	2.05	130.08
1902	2,710	.51	130.59
1903	1,731	.33	130.92
1904	1,354	.26	131.18
1905	4,648	.88	132.06
1906	4,561	.86	132.92
1907	5,126	.97	133.89
1908	5,160	.98	134.87

Year	New Streets in feet	New Streets in miles	Miles of Public ways
1909	1,176	.22	135.09
1910	4,450	.84	135.93
1911	5,198	.98	136.91
<hr/>		<hr/>	<hr/>
102,831		19.46	

The length of highways in our city is divided, according to the surface on them, approximately, as follows:

	Miles
Block paving,	6.40
Cobble paving,	.40
Macadam, (including State Roads)	15.57
Earth roads, about,	114.54
<hr/>	
	136.91

SIDEWALKS.

New sidewalks have been constructed during the year in compliance with the orders of the Mayor and Board of Aldermen as follows:

Street and Location	Decree Adopted	Length in feet	Yards of Concrete
Day street, east side at Martin Webber heirs	Oct. 18, 1910	90	56.6
Kimball street, south side Fairmount street easterly.....	Nov. 15, 1910	242	168.1
South street, east side from land of P. B. Kiely to Everett street	Oct. 4, 1910	1,605	987.4
Water street, east side, Arden Mill crossing to Duck Mill road.....	Oct. 4, 1910	2,550	1,961.6
Clarendon street, west side, Daniels street southerly 200 feet	June 7, 1911	200	136.7
Clarendon street, west side, Fairmount to Plymouth.....	Oct. 4, 1910	200	167.6
Cedar street, east side, Orange to Pearl.....	June 21, 1911	795	511.3
Cedar street, east side, Congress to Orange.....	Aug. 2, 1911	350	192.1
Fourth street, north side, Water St. to Water St. lane.....	June 21, 1911	96	63.5
Hawes street, south side at land of F. A. Page.....	June 21, 1911	112	77.8
Highland avenue, east side, Lunenburg to Pearl.....	July 6, 1911	1,994	993.3
Garnet St., south side, Mt. Vernon St. to bound No. 1. Bemis road, east side from land of Labbe southerly 123 feet to Baldwin heirs.....	July 19, 1911	238	158
Bemis road, west side at Dufort's.....	Oct. 4, 1910	123	84.3
Day street, west side, at Mrs. Frances Lawrence's.....	June 21, 1911	67	44.5
Falulah street, north side to land of Falulah Paper Co.....	Aug. 2, 1911	84	52.7
Green street, north side, at land of Mrs. Cumings.....	Aug. 2, 1911	434	320.4
Green street, north side, at Sanderson's.....	July 19, 1911	100	50.3
Melrose street, west side, Market to Dover.....	Oct. 17, 1911	106	53.3
Sheridan street, east side, at St. Francis Assissi Parochial School.....	Aug. 2, 1911	282	206.3
Dover street, north side, Sheridan St. westerly 100 feet Sheridan street, east side, Falulah street to land of St. Francis Assissi Parochial school.....	June 21, 1911	160	112
Hartwell street, east side, at Wm. Powell's.....	June 21, 1911	100	75.8
Snow street, east side, at Lavery's.....	Aug. 2, 1911	340	236
Second street, south side, Water St. to Railroad St.....	Oct. 4, 1911	99	65
	Oct. 17, 1911	75	49.6
	July 16, 1911	448	252.4
		10,890	7,070.6

The following sidewalks have been ordered but not yet constructed: South side of Adams street and east side of Hartwell street, abutting land of Jacob Ashline. North side of Daniels street from Clarendon street to Madison street. Some work has been done on the sidewalks ordered on the north side of Leighton street from Beech street easterly 750 feet, and on the north side of Market street from Bemis road to Sheridan street. Assessments have not been levied for walks constructed on north side of Green street from Day street to Blossom street, east side of Highland avenue from Lunenburg street to Pearl street with the exception of frontage at land of Henry O. Sawyer, east side of Hartwell street at land of Wm. M. Powell, south side of Second street from Water street to Railroad street, east side of Snow street at land of Arsene Lavery, and the east side of South street from land of P. B. Kiely to Everett street. Assessments amounting to \$5,008.52 have been levied during the year. Sidewalks constructed on Kimball street south side, Fairmount street easterly, Clarendon street west side, Fairmount street to Plymouth street, Fourth street north side, Water street to Water street lane, Green street north side from Day street to Blossom street, and on Second street south side from Water street to Railroad street, were built of tar concrete. All other sidewalks were built of cement concrete. All cement concrete was laid by day labor and all tar concrete was laid by Jeremiah Crowley. O. E. Litchfield furnished all granite curb for sidewalks.

The following table gives a comparison and summary of new sidewalks during the past twenty-one years:

Year	Length in feet	Yards of Concrete	Assessments
1891	4,458	2,772.9	\$1,676 87
1892	4,925	3,143	1,940 04
1893	10,122	7,245	3,859 75
1894	9,710	6,731.8	4,058 18
1895	1,583	1,050.1	334 43
1896	1,638	1,157.5	889 89
1897	4,051	2,733.7	1,905 03
1898	4,328	2,872	2,397 25
1899	4,319	2,825.8	3,221 59
1900	3,784	2,508.3	1,394 13
1901	878	602	1,377 18

Year	Length in feet	Yards of Concrete	Assessments
1902	4,392	2,854.5	\$3,396 99
1903	2,846	1,819.1	1,787 68
1904	2,261	1,549.2	420 17
1905	3,094	2,112.3	3,498 59
1906	4,483	2,747.2	3,418 39
1907	1,826	1,135	1,560 63
1908	1,784	1,253	2,447 25
1909	4,605	2,979.2	3,307 68
1910	2,762	1,792.2	2,051 13
1911	10,890	7,076.6	5,008 52
	88,739	58,960.4	\$49,951 37

PAVING.

Granite block paving has been laid during the past season in Princeton road from Waites corner to the southerly end of Crocker-Burbank Co.'s "Stone Mill," connecting with the portion laid in 1910. A total distance of 893 feet, and an area of 2,570 square yards was laid in Princeton road. The work of paving this road, which was formerly macadamized, was started in 1910 when a distance of 935 feet and an area of 2,120 square yards was laid. This year it was deemed advisable to continue this work, beginning at the northerly terminus of the paving laid in 1910 and completing it to Waites corner. There still remains about 300 feet of macadamized road between the coal trestle of the Crocker-Burbank Co., near Wachusett station, and the southerly end of the paving laid in 1910, which has a broken up and disintegrated surface owing to the heavy traffic conditions. It would be economical to complete this section of this road during the coming year, as it is impossible to maintain the macadam and keep it in good condition for any length of time. The paving in Princeton road was laid by the city employees upon a gravel foundation and the joints were filled with cement grout. This makes a total addition of length of block paved streets of .17 of a mile. The total amount of the block paving in streets paved the whole width of the travelled way is about 125,952 square yards, and in addition there is considerable area paved in connection with the car tracks, where the space between the track and the curb line is not

paved, which is not included in the above quantity. There are a number of streets paved with cobbles, having a total area of about 5,971 square yards.

MACADAM.

Macadam pavement has been laid during the season in Ashburnham street from Westminster street to Westminster Hill road, a distance of 2,130 feet, and an area of 6,192 square yards. This makes a total addition to our macadam mileage of .4 of a mile. A bituminous binder was used in this work.

GRADE CROSSINGS.

Repairs to the sidewalks and paving upon the Rollstone street grade crossing were completed during the year. Settlement between the two bridges and at the northerly approach to the river span made it necessary to reset the curbing and relay a considerable amount of the paving in the roadway. The work of loaming the slopes at both approaches was also done. The sidewalks were skin coated with tar concrete throughout the entire job, as I deemed the work done in 1910 to be inferior to the quality of work which is called for in the specifications. The adjustment of the land damage claims on account of the construction of this crossing was successfully accomplished during the summer. The total amount of these claims is \$46,617.20, of which the Boston & Maine Railroad pays 65 per cent, State of Massachusetts 25 per cent and the city 10 per cent. The cost to the city would be \$4,661.72. The report of the auditor has not been received as yet.

I would like to call attention again to the dangerous crossings on the New York, New Haven & Hartford Railroad in South Fitchburg at Duck Mill road and Bemis road. This section of the city is a growing one and train traffic is yearly increasing, so that it would be advisable to take definite action at an early date for the appointment of a Commission to consider the need and method of abolition. As all legal procedure in these questions is very slow it is none to early to take action upon this during the coming year.

ASSESSORS' PLANS.

After a conference with the Board of Assessors it was decided that the area in Ward Four which is bounded on the north side by the southerly lines of land of Alvah Crocker, Burbank Hospital, and Essex street; on the east side by Nutting street; on the south side by Simonds street, crossing High, Elm and Mechanic streets, to Prospect street, at a point south of Prince street; and on the westerly side by Prospect street, should be done this year. This work was done during the summer months by employees of this department. The amount expended was \$500. I would recommend that the same amount be expended next year. Considerable work has also been done in making the necessary changes in existing plans required by real estate transfers to keep them up to date.

PARK DEPARTMENT.

A survey was made and plans furnished for the transfer of about 11.27 acres of the City Farm land to the Park Commissioners for the purpose of establishing a playground for the South Fitchburg district. This land is at the southerly end of the farm on both sides of Canton street and lies westerly from Abbott avenue at its junction with Water street. Work was also done in connection with the taking of land for the Salem street playground.

WATER DEPARTMENT.

Surveys for two purchases of land at Meetinghouse Pond and the taking of measurements for making plans for extensions to water mains and for the locations of gates, hydrants, etc., were done at the request of the superintendent of this department. Considerable field work was also done in connection with propositions for increasing the storage capacity of the city's supply. During the periods of heavy rainfall considerable water is wasted from the Falulah brook and Wachusett lake watersheds. Studies are being made and data secured to determine the best method for increasing the storage capacity of the water supply.

BRIDGES.

The most important problem which has been undertaken this year by this department in the line of new construction work was the bridge or viaduct at Fifth street. When the question of plans and specifications for this structure was referred to me by the City Council I began an investigation to determine the best method of securing them for the city. By the middle of February I reached the conclusion that I would recommend to the City Council that a consulting engineer be secured for the purpose of perfecting plans. This course was advisable because of the importance of this structure from an engineering and architectural view point. Engineering problems which required the skilful handling of trained bridge designers were involved. Some of these difficulties are occasioned by the agreements entered into between the Boston & Maine Railroad, New York, New Haven & Hartford Railroad, the Wheelwright Paper Company and the city. These specifications, stipulations and agreements which affected the design of this structure are as follows: The decree of the County Commissioners specified that no pier or abutment should be placed upon the locations of either railroad or the land controlled by them. The Wheelwright Paper Company secured an agreement with the city which specifies that the structure upon their land should be of reinforced concrete and that the piers should be placed at least 100 feet apart. Also that the structure must not interfere with the use of their coal trestle or driveway and must be higher than the finishing room in their main mill. The specifications regarding the crossing of railroads and use of coal trestle occasioned the design of the 204 feet 9 inch span of this bridge. I believe the expense for plans, specifications and preliminary investigation upon this bridge is small compared with the amounts spent for this purpose by other cities on structures of similar magnitude. The perfected design successfully handles all engineering questions involved and the plans have been approved by the parties interested.

A description of the design of this structure follows: The viaduct consists of five reinforced concrete spans; one of 204 feet 9 inches across the railroad locations and the Wheelwright Paper Company's coal trestle; three spans of 113 feet across the

intervening land of the Wheelwright Paper Company and Nashua river; one span of 76 feet 3 inches to an abutment at west side of driveway and one of 32 feet $7\frac{1}{2}$ inches across the driveway to an abutment at easterly or Fulton street end of bridge. The construction features of the span across the locations of the railroads and coal trestle consist of two reinforced concrete ribs spaced 26 feet 8 inches centers; span of 204 feet 9 inches and rise to crown of arch of 48 feet; steel floor beams incased in concrete are carried by 10-inch eye beam hangers from these ribs. The floor consists of a 5-inch reinforced concrete slab, the roadway being 23 feet wide at points where the ribs pass through and 26 feet where the head room under the ribs is sufficient to give clearance for travel. The floor beams extend beyond the center of each rib a distance of 6 feet 8 inches and will carry the granolithic sidewalks. The arch ribs are wind braced at the crown and quarter points of the span. This bracing consists of steel frames incased in concrete. The 113 foot spans from the pier at coal trestle to pier No. 4 in the easterly bank of the river and the 76 foot 3 inch span to the driveway will consist of three reinforced concrete ribs spaced 13 feet 4 inch centers on which open spandrel walls will be erected to the level of the lower side of floor slab. Floor beams of reinforced concrete will be spaced 5 feet 3 inches apart across these spans and will be built into the spandrel walls and have sidewalk brackets extending out at each end. A 5-inch floor slab of reinforced concrete will complete the principal construction details. The reinforcement for the spans thus far described will consist of structural steel in the ribs and twisted square bars in the floor, spandrel walls, piers, cross walls between columns on piers, in the foundations of piers and abutments. The 32 foot $7\frac{1}{2}$ inch span across the driveway leading to the Wheelwright Paper Company's mill will be similar in construction to the 113 foot spans with the exception that steel twisted square bars will be used for reinforcement. Paneled railing will be upon both sides of the structure and a complete lighting system will be installed. The electric wiring will be placed in conduits underneath the sidewalks. This department has furnished the engineering required for the construction work thus far done, since the contract for this bridge was awarded to the McHarg-Barton Co. of New York. The esti-

mated amount of their contract is \$82,528.50. Work began upon the construction of the east abutment and pier No. 4 on the east bank of the river on Oct. 4, 1911. Excavations have been done on piers No. 2 and No. 3 on the Wheelwright Paper Co.'s land. First-class work has been done by the contractors in placing concrete to date. The specifications provide that the city should furnish and lay the granite block paving on the bridge. I would recommend that Fifth street be paved from Water street to the westerly approach, and that Harvard street be macadamized to Summer street. It would be advisable to do this work before the bridge is open to traffic.

Other bridges which have received attention during the year are the two span truss bridge in Falulah road, the iron truss bridge in Kimball street, and the old barn bridge in Bemis road. It was determined after investigation to use concrete in repairing the roadways of these bridges. Expanded metal was used for reinforcement of this concrete. I inspected the old barn bridge in Bemis road and investigated the strength of its members. I found it in good condition and it is safe for the present traffic conditions in that section of the city. During the coming year it needs a small expenditure for painting and minor repairs. However, I believe it would be economical to replace this structure with a concrete or steel girder bridge whenever the increase in traffic conditions warrants the expenditure.

All other bridges throughout the city are in good condition and with the exception of painting the iron bridges no large amount need be spent for maintenance during the coming year.

MISCELLANEOUS.

Street numbers have been furnished applicants for newly constructed houses and a few changes have been made where required. Lines and grades have been furnished without cost to prospective builders whenever requested. Considerable of the time of your engineer has been spent in consulting with committees and in furnishing estimates, giving advice and information for new construction work. When requested by the legal department plans and photographs were made of locations where accidents have occurred which may result in claims for

damages against the city. As clerk of the Board of Street Commissioners I have many important duties to perform which take considerable time and add to the responsibility of my duties in this department.

FINANCIAL STATEMENT.

The amount expended during the year for the work of the department was \$4,560.21, which was divided as follows:

Paid salary of city engineer,	\$1,500 00
Services of assistants,	2,541 00
Teams and car fares,	305 25
Paper and office supplies,	116 63
Lumber and stakes,	54 13
Printing, stamps and stationery,	28 20
Stone bounds,	15 00
	—————
	\$4,560 21
Received appropriation,	\$3,000 00
Assessors' plans,	500 00
Street construction,	205 35
Sidewalk construction,	278 68
Paving construction,	22 30
Macadam construction,	6 50
Water department,	113 15
Public Parks department,	30 40
Sewer department,	126 07
	—————
	\$4,282 45
Deficit balance,	277 76
	—————
	\$4,560 21

The following table shows the appropriation for the Engineering department each year for the last twenty-one years, together with the additional receipts and the yearly expenditures.

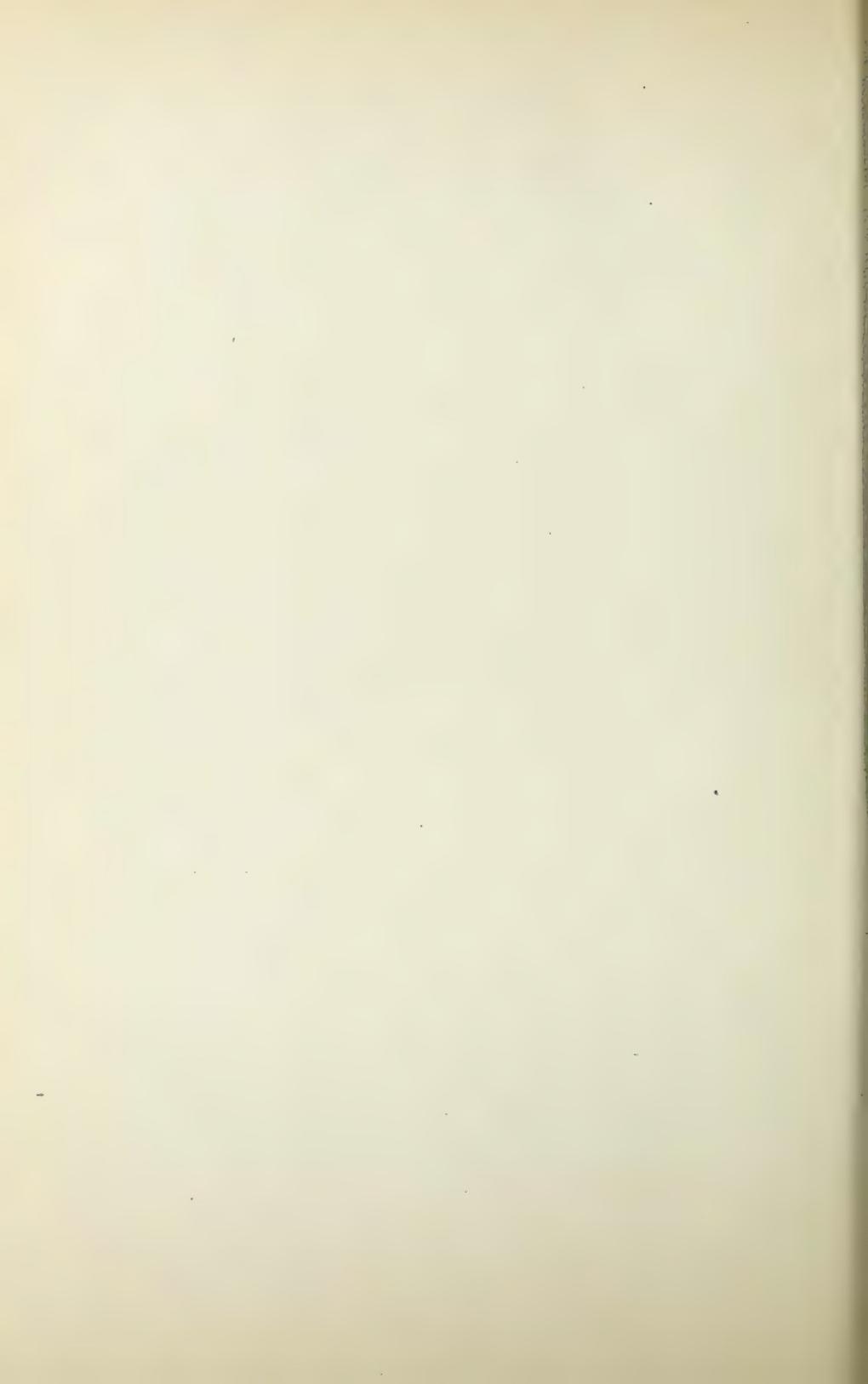
Year	Appropriation	Receipts	Expenditures
1891	\$1,500 00	\$73 15	\$1,781 73
1892	2,500 00	75 65	2,785 49
1893	2,500 00	320 00	3,694 85
1894	3,000 00	374 53	3,425 14
1895	3,000 00	54 20	2,967 23
1896	3,000 00	33 00	3,041 65
1897	3,000 00	85 00	3,212 04
1898	3,000 00	25 00	3,090 27
1899	3,000 00		2,981 99
1900	3,000 00	5 95	3,510 71
1901	3,000 00	50 00	3,805 30
1902	3,000 00	169 80	3,800 10
1903	3,000 00	3 00	3,943 86
1904	3,000 00	290 05	3,690 97
1905	2,500 00	1,237 08	3,546 59
1906	2,800 00	970 13	3,957 05
1907	2,800 00	897 77	3,899 31
1908	3,000 00	1,476 88	4,564 11
1909	3,000 00	1,262 60	4,713 04
1910	3,000 00	1,689 90	5,192 32
1911	3,000 00	1,282 45	4,560 21

The inventory of the personal property of the department shows a value of about \$2,000. This does not include a large number of street, water, and other plans in the office, the value of which is difficult to estimate.

Thanking the City Council and the city officers for their kindness and courtesy to me at all times during the year and with an expression of appreciation of the faithful and conscientious service rendered by my assistants, I respectfully submit this, my first annual report.

Respectfully submitted,

TIMOTHY J. SHEEHAN,
City Engineer.



THIRTY-NINTH
ANNUAL REPORT
OF THE
STREET COMMISSIONERS
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911

BOARD OF STREET COMMISSIONERS.

JOSEPH A. RIVERS,

Term expires February, 1912

DAVID C. DACEY,

Term expires February, 1913

THOMAS A. MONAHAN,

Term expires February, 1914

ORGANIZATION FOR 1911.

THOMAS A. MONAHAN,

Chairman

TIMOTHY J. SHEEHAN,

Clerk and Engineer

MICHAEL J. HOGAN,

Superintendent

EUGENE OAKMAN,

Bookkeeper

REPORT OF STREET COMMISSIONERS.

To the Honorable City Council :

GENTLEMEN :— The Board of Street Commissioners, established under the provisions of Chapter 132 of the Acts of 1899, respectfully presents its twelfth annual report, covering the work done for the year ending Nov. 30, 1911.

CONTRACTS.

Six contracts have been awarded for furnishing material to the department, all of which have been ratified by the City Council. They are as follows :—

1. Under date of April 17, 1911, to Orin E. Litchfield, for granite sidewalk curb, delivered on the streets where ordered for 29 cents per linear foot for straight rock faced ; 41 cents per linear foot for straight pointed faced ; 45 cents per linear foot for circular rock faced and 53 cents per linear foot for circular pointed faced.
2. Under date of April 17, 1911, to Orin E. Litchfield, for granite flagging delivered on the streets where ordered for 35 cents per linear foot for square ends and 43 cents per linear foot for skew ends.
3. Under date of June 26, 1911, to F. A. McCauliff, for broken stone loaded into city teams at crusher, 75 cents per ton of two thousand pounds.
4. Under date of June 12, 1911, to Samuel J. Thompson for screened sand delivered on streets as ordered at 58 cents per cubic yard.
5. Under date of October 2, 1911, to F. A. McCauliff for 130,000 granite paving blocks more or less, delivered on Main street, as ordered, at \$55.00 per thousand.
6. Under date of October 2, 1911, to the McHarg-Barton Co., of New York, for doing all work, and furnishing materials necessary to construct Fifth street viaduct, according to the plans and specifications, for the following prices :—

For earth excavation, in foundations, per cubic yard,	\$1 25
For rock excavation, in foundations, per cubic yard,	1 00
For earth fill in approaches, per cubic yard,	75
For cinder filling under sidewalks, per cubic yard,	50
For gravel filling in roadway of viaduct, per cubic yard,	1 00
For steel bars for reinforcement of concrete, per ton of 2,000 lbs.,	50 00
For structural steel for reinforcement of concrete, per ton of 2,000 lbs.,	90 00
For concrete, Class A, per cubic yard,	4 00
For concrete, Class B, per cubic yard,	9 00
For concrete, Class C, per cubic yard,	12 00
For concrete, Class D, per cubic yard,	12 00
For concrete, Class E, per cubic yard,	12 00
For concrete, Class F, per cubic yard,	12 00
For hand rails erected in place, per linear foot,	2 25
For scrubbing concrete surfaces, per square foot,	30
For painting concrete surfaces, per square foot,	06
For storm water inlets and drain pipes, erected, per inlet,	50 00
For electric conduits, laid, per duct foot,	25
For each single lamp, erected,	50 00
For each cluster lamp, erected,	90 00
For complete electric wiring of bridge,	750 00

PERMITS.

During the year 47 permits were issued for use of street and sidewalk; 21 permits were issued for connecting with main sewers, from Dec. 1, 1910, to May 1, 1911, when the maintenance of the sewer system was transferred to the Sewage Disposal Commissioners; and 613 permits were issued for excavations in different streets, of which number 404 were to the Fitchburg Gas & Electric Light Company, 64 to the Water Department, 15 to the Sewage Disposal Commissioners, and 130 to other corporations and individuals.

The following table shows the number of permits issued each year for the past twelve years:

Year.	For Excavation.	For Sewer Connection.	For Use of Street.
1900	244	51	12
1901	316	57	26
1902	181	57	14
1903	374	50	13
1904	217	35	21
1905	276	56	22
1906	224	42	16
1907	233	55	24
1908	351	65	23
1909	416	98	34
1910	567	173	24
1911	613	21	47

STREET WATERING.

The total length of streets watered or oiled during the past season was 163,745 feet, or 31.01 miles. The cost of watering and oiling, including the cost of repairs to carts, was \$9,191.26, or \$296.40 per mile of streets watered or oiled.

During the past season your commissioners have considered it advisable to use oil more extensively for laying the dust. The recommendation of the Water Commissioners to reduce the amount of watering of streets by one-half made this course absolutely necessary in order to meet their demands for conserving the water supply. The oiling of streets cost \$3,234.78. A light asphaltum oil, furnished by the Standard Oil Company, was used in most of the streets treated. After the oil had become incorporated with the road material it gave universal satisfaction. One application was sufficient in most of the gravel and macadam roads which received treatment this past season. An automobile sprayer, furnished by the American Car Sprinkling Company, gave the best results in applying the oil to the streets. The penetration method was used as in past years, with the exception that compressed air furnished to the spraying apparatus from a compressor connected with the gasolene engine of the automobile forced the oil into the road. Your commissioners are of the opinion that the use of oil will aid materially in preserving the surface of macadam and gravel roads by bonding the ingredients together, besides successfully handling the troublesome dust nuisance.

Year.	Miles of Street Watered.	Total Cost.	Cost per Mile Watered.
1900	22.51	\$4,691 09	\$208 40
1901	23.49	4,011 03	170 75
1902	24.26	4,346 09	179 14
1903	24.20	4,200 42	173 57
1904	24.95	4,708 26	188 71
1905	25.51	5,579 06	218 70
1906	26.00	5,844 46	224 78
1907	26.06	5,691 14	218 39
1908	26.90	7,230 87	268 80
1909	28.70	8,072 23	281 26
1910	29.35	8,090 91	275 66
1911	31.01	9,191 26	296 40

In the above table the total cost and the cost per mile watered includes the repairs to carts, but not the cost of new carts. New carts have been purchased during the past twelve years as follows:

- 1901, one cart at a cost of \$230.60.
- 1902, two carts at a cost of 511.20.
- 1904, one cart at a cost of 320.00.
- 1905, two carts at a cost of 512.00.
- 1906, two carts at a cost of 511.00.
- 1909, two carts at a cost of 664.80.

During the past twelve years all street sprinkling has been done by day labor.

EXPENDITURES AND RECEIPTS.

	Expended	Appropriation and Loans	Assessments and Other Receipts
Street construction,	\$16,076 45	\$15,155 60	\$920 85
Street maintenance,	43,497 95	32,000 00	9,907 31
Sidewalk construction,	19,079 88	13,145 40	5,934 48
Sidewalk maintenance,	3,874 14	3,500 00	434 70
Sewer construction,	263 86		333 13
Sewer maintenance,	1,176 94	3,500 00	3,580 02
Paving construction,	16,761 33	14,802 84	1,958 49
Paving maintenance,	9,633 92	6,000 00	1,326 99
Macadam construction,	5,075 70	4,854 36	221 34

	Expended.	Appropriation and Loans.	Assessments and Other Receipts.
Macadam maintenance,	\$15,171 90	\$4,000 00	\$8,226 35
Street watering and oil- ing,	9,191 26	1,500 00	8,054 22
Fifth street bridge con- struction,	5,731 34	5,731 34	
	<hr/>	<hr/>	<hr/>
	\$145,534 67	\$104,189 54	\$40,897 88

STREET CONSTRUCTION.

On construction of streets for labor and materials the largest amounts expended were as follows: Clifton street, \$1,557.88; Fairmount street, \$2,312.72; Klondike avenue, \$506.96; Maverick street, \$376.12; Francis street, \$497.09; Thorndike street, \$385.82. Land damages, as voted by the City Council, were paid on account of the construction of the new streets as follows: Boylston street, \$347 06; Charles street extension, \$1,741.90; Grand street, \$300 00; and Federal street, \$15.00. Retaining walls were built on streets as follows: Ashburnham street, \$543.83; Bond street, \$687.62; Payson street, \$630.96; South street, \$253.55; View street, \$273.27; Water street, \$888.44; Westminster Hill road, \$150.45; Daniels street, \$174.42; Gage street place, \$134.76; Leighton street, \$197.56; Lowe passway, \$38.20; and Maverick street, \$180.75. A culvert was built near Salem street at dump which cost \$398.67, and one in Lowe passway at a cost of \$63.74. Back curbing was placed in South street, because of the laying of new sidewalk, at a cost of \$1,320.27. The walls on Payson street and Bond street were partly constructed in 1910, the cost of completing these jobs during the past season being as stated above.

STREET MAINTENANCE.

The largest items of expense in this division are as follows: Hay, grain and straw, \$4,036.99; administration and office expense, \$4,176.14; cleaning gutters, \$4,409.98; care of snow and ice, \$2,508.32; collecting ashes, \$3,364.84; collecting rubbish, \$1,485.32; gutter paving in various streets, \$1,111.26; care of barn, \$2,139.56; bridge repairs, \$2,111.61; cart and sled repairs, \$721.43; blacksmithing and shoeing, \$1,024.38; cinder-

walks, \$1,895.59; harnesses and harness repairs, \$488.70; sanding sidewalks, \$334.77; retaining walls, \$396.83. These items make a total of \$30,205.72, out of a total expenditure of \$43,582.87, leaving a balance of \$13,377.15 expended directly in improving the wearing surface of about 116 miles of earth roads. Of course some of these items have an indirect bearing on the maintenance of the streets of the city.

SIDEWALK CONSTRUCTION.

The season's work under this division has been unusually heavy. More linear feet of new walks being laid than any other year of the past twenty-one, in which records are available for comparison. Over two miles of walks were completed during the past season, 12 per cent being laid with tar concrete and 88 per cent with cement concrete. About 2,000 feet of sidewalks ordered by the City Council have not been constructed. Orders for this work were received so late in the season that it was impossible to complete it. A beginning was made on some of this work, so that it can be completed early next year.

SIDEWALK MAINTENANCE.

Streets upon which the largest amounts were expended under this division are as follows: Arlington street, \$253.04; Bluff avenue, \$247.98; Charles street, \$154.82; Cross street, \$112.24; Day street, \$164.26; Hawes street, \$100.88; High street, \$307.76; Lawrence street, \$173.49; Main street, \$430.93; Plymouth street, \$165.87; Water street, \$323.20. With a few exceptions, all repairs to tar sidewalks were made with tar concrete, the work being done by Jeremiah Crowley. On Main street, at A. I. Rome's (Nos. 358-364), and on Oliver street, at B. A. Cook's, the old surfacing of tar concrete was replaced with cement concrete. In each of these cases the abutter agreed to pay for half the cost of the repairs.

SEWER CONSTRUCTION.

Work under this heading consisted of placing grates in Summer street and Oak Hill road, and catch basins in Daniels street and Oak Hill road. The largest part of the amount expended being in furnishing labor and materials for outside parties.

SEWER MAINTENANCE.

Your commissioners did the work of maintaining the sewer system until May 1, 1911. This division of our work of past years was transferred to the control of the Sewage Disposal Commissioners upon the above date. The amounts expended by this department are as follows: Cleaning and thawing out catch basins, \$875.73; flushing sewers, \$14.39; miscellaneous, \$286.82.

PAVING CONSTRUCTION.

Granite block paving was laid during the past year in Princeton road from Crocker, Burbank & Co.'s "Stone Mill" to Waites corner. This work was a continuation of the section laid in 1910. A distance of 893 feet, and an area of 2,570 square yards was laid the past season, at a cost of \$7,156.82, or \$2.78 per square yard.

The work of repaving the south side of Main street, which was ordered by the City Council, was delayed until late in the fall, owing to the controversy with the Fitchburg Gas & Electric Light Co., for work done in 1910, between Day street and Oliver street. A satisfactory adjustment was secured finally by your commissioners, after many conferences with the officials of the lighting company. The city secured \$4,500 for its claims against the company, on account of work done in laying a 24 inch gas main in Main street between Day street and Circle street. The work of repaving started in September. New blocks were used, the old ones being removed to the Circle street ball grounds, where they are being stored until they can be recut for use in future paving operations. It was deemed advisable to discontinue operations upon this work until spring, after the paving between the tracks was laid to Circle street, and the south side of the street completed to City Hall. This improvement in Main street was a great public necessity. Favorable comments upon the improved surface of this section of the street have been received from many of our citizens who daily have occasion to travel on this main artery of the streets of our city. A comparison between the south and north sides of this section of Main street will afford an excellent example of the advantages of a good permanent pavement over one which has been worn into dangerous depressions.

by years of service, and by excavations which are constantly necessary in a growing city. The foundation for this pavement was prepared by screening the sand cushion found under the old paving, as far as possible; new sand being added where necessary to bring the surface to subgrade. James McEleney laid 2,932 square yards and pavers employed by the department laid 1,258 square yards. The cost of this work was \$9,443.83. The joints were grouted with cement mortar.

PAVING MAINTENANCE.

Cleaning granite block paving, largely by patrol, with broom and shovel, cost \$7,752.61. Repairs to block paving in Fairmount street were continued during the year at a cost of \$197.25. The streets where the largest amounts were expended upon improving the surface of the paving are as follows: Lunenburg street, \$84.97; Main street, \$188.65; River street, \$102.49; Water street, \$479.90. Paving between Walnut street and Spruce street, on the west side of Water street, was relaid. It will be necessary to repave the east side between the Union Machine Shop and Third street during the coming year. The balance expended under this division was occasioned by work done by outside parties, mostly for the Fitchburg and Leominster Street Railway Co., in repaving the car track on Water street, between Fourth street and Burnett Passway, which was occasioned by the replacement of the old Tee rails with the girder type. This was a much needed improvement in this section, as it was impossible to keep the paving in safe condition with the Tee type of rail. The remainder of the work was done for the Fitchburg Gas and Electric Light Co., on account of their operations in various paved streets. In keeping the paved streets clear and free from the troublesome dust nuisance the Connolly Flushing Machine, which was purchased during the year proved to be a valuable asset to the department's equipment. Many expressions of recommendation for the work done by this machine have been received from the merchants doing business on Main street.

MACADAM CONSTRUCTION.

New macadam pavement was laid the past season in Ashburnham street, from Westminster Hill road, to the junction of River and Westminster streets. An area of 6,192 sq. yds. was laid at a cost of \$4,862.49, or about \$.78 per square yard. A bituminous binder was used on this work. Work was started on preparing the subgrade for the macadam ordered in Cedar street. This work will be completed next season.

MACADAM MAINTENANCE.

Cleaning the surface of macadam streets cost \$1,765.47. The largest amounts expended for repairs on different streets were as follows: Circle street, \$165.80; Day street, \$121.11; Main street, \$139.99; Myrtle avenue, \$228.51; River street, \$1,264.82; Water street, \$5,856.03; Westminster street, \$3,266.90. A bituminous binder was used in the work of resurfacing done on Water and Westminster streets. The work on River street was water bonded. This form of construction was deemed economical at this time as a temporary expedient to keep a good wearing surface on this section of the street. Because of the extremely heavy travel at this point, we are of the opinion that granite block paving must be used to replace the macadam when the section of the trunk sewer to be laid in this location is completed. The areas of macadam paving laid in the principal maintenance work of the past year are as follows:

Water street,	8,493 square yards
River street,	4,265 square yards
Westminster street,	4,746 square yards

It will be advisable to resurface sections on Water street, between Duck Mill road and Bemis road, and on Westminster street, between Beoli Mill and Steamer House, during the coming year, as these locations have become badly rutted by heavy traffic conditions.

RECOMMENDATIONS.

We would renew our recommendation of last year that granite block paving be laid in Summer street, between St. Bernard street and a point near Clyde street.

We would recommend that the following granite block paving work be done: The north side of Main street be repaved between Oliver street and Circle street, doing substantially the same class of work that was done on the south side this past season; Daniels street, between Columbus street and Pratt street; Circle street, from Main street to River street. Because of the narrowness of this street it is impossible to maintain a satisfactory surface economically, for the heavy teaming traffic, with other material except granite blocks. Princeton road, from present terminus to coal trestle, a distance of 300 feet; Putnam street, from Main street to Broad street.

We would renew our recommendations of last year that the following streets be macadamized: Walton street from Pine street southerly towards Forest Hill cemetery; Oliver, Fox, Hartwell and Grove streets from Elm street to Prichard street; Willow street from Main street to Green street; Sanborn street from Westminster street to Temple street, and North street from Pearl street to Rindge road.

We would recommend that macadam pavement be laid in the following streets: Summer street between Clyde street and the Lunenburg town line; Columbus street, from Daniels street to Oak Hill road; Blossom street from Pearl street to Ross street; and Bemis road from Water street to Summer street.

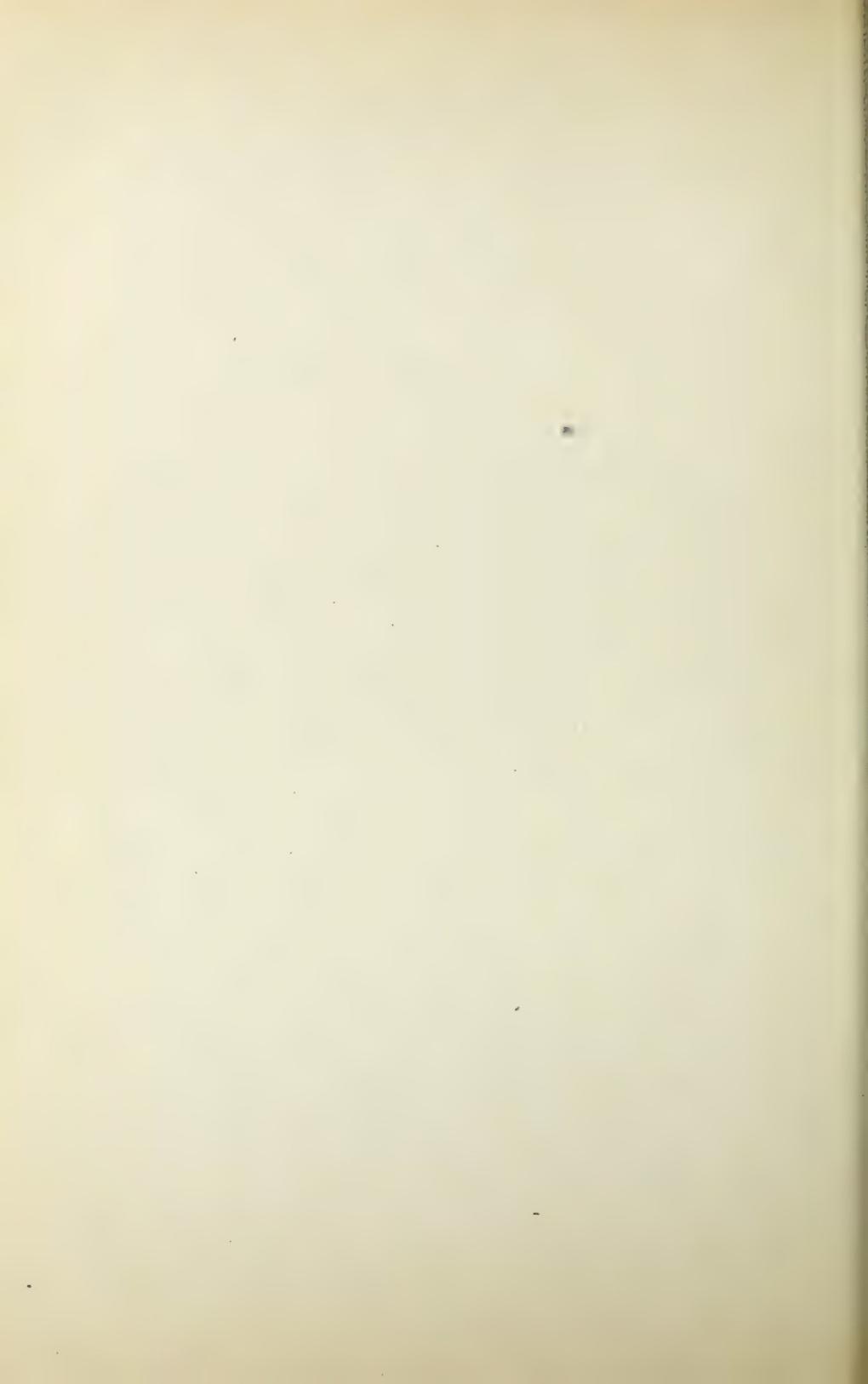
We desire to call your attention again to the need of a new location for a stable and storage room for the department. A location with steam railroad connection is necessary. At present a considerable amount is expended in hauling supplies, each year, which might be saved if a satisfactory railroad location was secured.

Presented herewith is the report of the Superintendent of Streets, which shows the expenditures in detail under the different divisions.

Respectfully submitted,

T. A. MONAHAN,
J. A. RIVERS,
D. C. DACEY,

Street Commissioners.



SUPERINTENDENT'S REPORT.

To the Honorable Board of Street Commissioners :

GENTLEMEN :—I herewith present to you for your approval my fifteenth annual report, showing appropriations, loans, receipts and expenditures for the year ending Dec. 1, 1911.

MACADAM CONSTRUCTION.

Ashburnham street was macadamized from River street to Westminster Hill road ; Cedar street bed prepared.

For length in feet and number of square yards laid see City Engineer's report.

Order No.	Labor and material for sundry parties, STREETS.	Pay roll	Sundries	Total
		\$25 04	\$8 20	\$33 24
917	Ashburnham street,	2,392 58	2,469 91	
765	Cedar street,	150 26	29 71	
		—————	—————	5,042 46
		\$2,567 88	\$2,507 82	\$5,075 70

MACADAM MAINTENANCE.

There was a large increase in the cost of cleaning macadam, due to the scarcity of water during the season ; also the cleaning of macadam preparatory to oiling streets, and the increase in the amount of surface to maintain.

The following streets were resurfaced : Circle street, from Mill A to Main street ; Day street, from end of paving to Green street ; Elm street, from Prichard street to Oliver street ; Highland avenue ; Main street, from Chestnut street to Pitts Mill ; Mt. Vernon street, from Garnet street northerly ; River street, from end of paving near Woodward's Mill to B. & M. side track at Mill C ; Water street, from end of paving to Duck Mill road ;

and Westminster street, from Pulp Mill to Steamer House.

The following streets were patched: Arlington street, from Prospect street to School street; Cottage avenue, at City Hall; Highland avenue, along gutter on east side; Main street, from Central street to crosswalk at watering trough; Mechanic street, at Crocker estate; Oliver street, from Main street to Elm street; Prichard street, from Crescent street to Elm street; Prospect street, from Arlington street to Main street; and Rollstone street, from Baker street to Main street.

CLEANING MACADAM.

	Pay roll	Sundries	Total
Academy street,	\$86 85	\$9 61	
Arlington street,	11 50	1 10	
Charles street,	28 85	3 41	
Cherry street,	12 00	1 65	
Circle street,	105 01	14 25	
Cottage square,	5 50	66	
Daniels street,	10 12	1 38	
Day street,	44 04	6 40	
Elm street,	184 56	17 30	
Fox street,	4 29	44	
Green street,	48 36	6 29	
Grove street,	12 48	1 45	
Hartwell street,	3 54	33	
Highland avenue,	13 00	1 43	
Kimball street,	87 32	12 15	
Main street,	58 82	8 16	
Mechanic street,	223 38	20 40	
Mt. Vernon street,	5 31	66	
Myrtle avenue,	15 93	1 87	
Newton street,	6 92	90	
North street,	55 68	7 36	
Oliver street,	12 99	1 54	
Prichard street,	71 51	8 41	
Prospect street,	5 00	55	
Putnam street,	3 40	46	
Rollstone street,	36 57	4 35	
Snow street,	53 20	7 28	
Wallace avenue,	8 49	1 22	

	Pay roll	Sundries	Total
Walton street,	\$4 62	\$ 66	
Water street,	42 92	8 05	
Westminster street,	269 17	22 32	
Princeton road,	58 09	4 01	
			\$1,765 47

Labor and material for sun-

dry parties,	1,161 26	508 44
Steam roller,	24 65	170 24
Tar bucket,	4 56	117 72

STREETS RE-SURFACED.

Academy street,	3 25	11
Arlington street,	13 54	4 43
Circle street,	54 36	111 44
Cottage avenue,	5 00	1 78
Daniels street,	2 75	23
Day street,	45 33	75 78
Elm street,	45 71	24 18
Fox street,	2 00	
Grove street,	2 25	
Hartwell street,	4 50	2 74
Highland avenue,	41 45	20 01
Luenburg street,	81	2 67
Main street,	93 51	46 48
Mechanic street,	21 72	4 86
Mill street,	1 60	4 01
Mt. Vernon street,	12 92	16 59
Myrtle avenue,	27	228 24
North street,	3 44	3 03
Oliver street,	9 50	2 22
Pearl street,	82	
Prichard street,	18 85	6 27
Prospect street,	43 53	12 29
Putnam street,	4 08	2 26
River street,	552 65	712 17
Rollstone street,	6 26	9 56
Snow street,	2 50	22
Wallace avenue,	1 50	
Water street,	2,227 39	3,628 64

	Pay roll	Sundries	Total
Westminster street,	\$1,044 63	\$2,222 27	
Princeton road,	8 88	2 08	
			\$11,419 56
	\$7,054 89	\$8,117 01	\$15,171 90

PAVING CONSTRUCTION.

The relaying of block paving on Main street, on the south side, from Putnam street westerly, on a sand foundation with a top dressing of sand and cement, was continued. Princeton road was completed to Westminster street.

For length in feet and number of square yards laid, see City Engineer's report.

Order No.		Pay roll	Sundries	Total
	Labor and material for			
	sundry parties,	\$144 52	\$16 16	
	STREETS.			
1008	Main street,	4,148 19	5,295 64	
918	Princeton road,	2,524 66	4,632 16	
				\$16,600 65
		\$6,817 37	\$9,943 96	\$16,761 33

PAVING MAINTENANCE.

Paving in the following streets was patched: Depot street, west side near Westminster street; Fairmount street at various places; Lunenburg street at various places; Main street, South side, from Myrtle avenue to Willow street, relaid, surfaced with sand and cement; River street, various places from Kimball road to Ashburnham street; Summer street, east side at Maverick street; and Water street, west side from Walnut street to Spruce street.

	Pay roll	Sundries	Total
Cart repairs,		\$5 50	
Cleaning pavements, W. F.	\$679 43	20 13	
Cleaning pavements,	6,562 12	490 93	
F. & L. St. Ry. Co. (Water street),	239 89	240 10	
Flushing Machine repairs,	2 58	48 98	

	Pay roll	Sundries	Total
Labor and material for sun-dry parties,	\$236 05	\$20 11	
STREETS.			
Crescent street,	1 04	44	
Depot street,	6 56	2 50	
Fairmount street,	168 02	29 23	
Lunenburg street,	81 76	3 21	
Main street,	151 96	36 69	
Milk street,	3 51	46	
River street,	77 62	24 87	
Summer street,	8 92	41	
Water street,	379 32	100 58	
Princeton road,		11 00	
Total streets,			\$1,088 10
	\$8,598 78	\$1,035 14	\$9,633 92

SEWER CONSTRUCTION.

	Pay roll	Sundries	Total
Labor and material for sun-dry parties,	\$153 98	\$ 66	
CATCH BASINS.			
Daniels street,	- 16 31	1 63	
Oak Hill road,	15 57	16 33	
			\$49 84
GRATES.			
Summer street,	18 36	21 86	
Oak Hill road,	11 38	7 78	
			59 38
	\$215 60	\$48 26	\$263 86

SEWER MAINTENANCE.

	Pay roll	Sundries	Total
CATCH BASINS.			
Cleaning catch basins,	\$483 43	\$78 95	
Thawing catch basins,	241 08	72 27	

	Pay roll	Sundries	Total
STREETS.			
Kimball street,	\$4 86	\$4 07	
Oak Hill road,	34 64	42 00	
			\$961 30
FLUSHING SEWERS.			
G. M. Parks Co.		4 80	
Main street,	6 16	88	
Water street,	2 22	33	
			14 39
Labor and material for sun- dry parties,	107 32	5 88	
MANHOLES.			
Cleaning manhole, Walnut street,	1 08	22	1 30
Pipe and cement,		1 50	
STREETS.			
Federal street,	75 33	2 50	
Norwood street,		84	
Oak Hill road,	5 70		
Punch brook,	77	11	
			85 25
	\$963 43	\$213 51	\$1,176 94

SIDEWALK CONSTRUCTION.

The following granolithic sidewalks were constructed : Cedar street, east side from Congress street to Pearl street ; Clarendon street, west side from Daniels street, southerly ; Day street (No. 952) west side from terminus northerly 84 feet at Mrs. H. Frances Lawrence's, (No. 1074) east side from terminus northerly at heirs of Martin Webber ; Dover street, north side from Sheridan street, westerly, Falulah street, north side, from Sheridan street, easterly ; Garnet street, south side, from Mt. Vernon street to bound No. 1 ; Hartwell street, east side, at Wm. Powell's ; Highland avenue, east side, from Pearl street to Lunenburg street ; Leighton street, north side from Beech street, easterly, curbing set and gutter paved ; Market street, north side, from Bemis road to Sheridan street, curbing set and .

gutter paved; Melrose street, west side, from Market street to Dover street; Sheridan street, east side from Falulah street, northerly; Snow street, east side, from Pearl street, southerly, 75 feet, at No. 153; South street, east side, from P. B. Kielty's to Everett street; Water street, east side, from Arden Mill crossing to Duck Mill road; Bemis road (No. 781) west side at J. H. Dufort's and (Nos. 992-10), east side from Baldwin's to Labbe's. For length in feet and number of square yards laid, see City Engineer's report.

The following tar sidewalks were constructed: Clarendon street, west side from Fairmount street to Plymouth street; Fourth street, north side from Water street to Water street lane; Green street, north side at Sanderson's; Hawes street, south side at F. A. Page's; Kimball street, south side from Fairmount street, easterly, and Second street, south side from Water street to Railroad street. For length in feet and number of square yards, see City Engineer's report.

Curbing was set and gutters paved on the following streets: Circle street, south side from bridge to Mill A, also crosswalk laid; Congress street, west side from Lunenburg street, northerly to angle in street; Damon street, north side from Clinton street to Myrtle avenue, also cross walk laid; Fairmount street, east side from Daniels street, northerly, and Hartford street, east side beginning at No. 52 and extending to bend in street.

The following cinder walks were constructed: Clinton street, west side at No. 514; Culley street, south side at No. 520; Deslisle street (No. 1083) south side from Madison street to Clarendon street, and (No. 1233) south side from Clarendon street to Beech street lane; Walton street, east side from Pine street, southerly, and Franklin road, south side from Clarendon street, westerly to end of sewer.

The following cross walks were constructed: Forest street, west side at Williams street; Lunenburg street, north side at Highland avenue; South street at Nashua street, and Bemis road at No. 57.

Order No.		Pay roll	Sundries	Total
	Balance, Dec. 1, 1910,		\$723 34	
	Accounts abated,		76 52	
	Labor and material for			
	sundry parties, \$125 99		27 38	
	Printing,		5 25	
	GRANOLITHIC—			
	SIDE WALKS.			
799	Cedar street,	1,007 79	741 95	
677	Clarendon street,	220 15	152 99	
1074-10	Day street,	47 68	34 77	
952	Day street,	104 35	64 49	
1064-10	Depot street,	3 00		
782	Dover street,	69 14	72 54	
954	Falulah street,	271 50	286 19	
909	Garnet street,	243 49	143 16	
1103	Hartwell street,	77 31	82 96	
786	Highland avenue,	1,608 70	846 78	
800	Leighton street,	468 53	271 96	
1232	Market street,	72 68	173 70	
955	Melrose street,	165 65	186 98	
783-953	Sheridan street,	369 77	318 45	
1179	Snow street,	54 92	53 50	
996-10	South street,	2,066 06	1,146 39	
997-10	Water street,	1,437 90	1,417 47	
781	Bemis road,	61 59	50 27	
992-10	Bemis road,	89 56	82 88	
				\$14,567 20
	TAR CONCRETE—			
	SIDEWALKS.			
993-10	Clarendon street,	206 46	195 43	
784	Fourth street,	73 93	91 17	
908	Green street,	170 14	141 28	
513	Hawes street,	118 02	97 68	
1167-10	Kimball street,	108 18	134 54	
798	Second street,	296 40	347 68	
				1,980 91

Order No.		Pay roll	Sundries	Total
CURB SET AND GUTTER PAVED.				
1058-10	Circle street,	\$170 98	\$174 24	
764	Congress street,	78 92	42 60	
560-09	Damon street,	115 61	80 70	
	Fairmount street,	183 12	20 28	
	Hartford street,	140 43	77 84	
				\$1,084 72
CINDER WALKS.				
766	Clinton street,	26 24	46	
767	Culley street,	16 05	2 37	
1083	Deslisle street,	30 60	6 90	
1233	Deslisle street,	14 50		
265	Walton street,	137 89	29 99	
614	Franklin road,	81 40	10 35	
				356 75
CROSS WALKS.				
	Forest street,	17 84	11 55	
	Lunenburg street,		14 52	
	South street,	16 36	24 67	
	Bemis road,	22 91	23 97	
				131 82
		\$10,591 74	\$8,488 14	\$19,079 88

SIDEWALK MAINTENANCE.

The following sidewalks were repaired: Arlington street, resurfaced with tar on the north side from No. 43 to No. 77, and on the south side from No. 42 to No. 52; Ashburnham street, west side resurfaced with tar from No. 171 to No. 183; Atlantic avenue, east side resurfaced with tar from No. 31 to No. 41; Birch street, north side resurfaced with tar at Water street; Blossom street, west side from Crescent street to No. 6 resurfaced with tar, and from Weymouth street to Gage street covered with cinders; Bluff avenue, both sides from Summer street to Atlantic avenue resurfaced with tar; Charles street, north side, curbing reset, gutter paved, and resurfaced with tar from South street to No. 12, also resurfaced with tar at No. 51; Crescent street, north side at Blossom street resurfaced with tar;

Cross street, east side from Laurel street to South street resurfaced with tar; Davis street, south side at new High School resurfaced with tar; Day street, west side at No. 42 and Dr. Lewis Fish's resurfaced with tar, at Mrs. L. W. Cumings curb set, gutter paved and cement laid, east side at Union street resurfaced with tar; Depot street, west side from Westminster street to bridge resurfaced with cement; Fairmount street, north side at fire station, at No. 150, south side at No. 197 and Clarendon street resurfaced with tar; Goodrich street, at A. B. Sherman's, resurfaced with tar; Hawes street, south side from Blossom street to F. A. Page's resurfaced with tar; High street, at Academy street, old High School and Grammar School and west side from No. 64 to No. 88 resurfaced with tar; Lawrence street, east side, curbing reset, gutter paved and tar concrete laid from Goodrich street to No. 116; Main street, north side from Blossom street to No. 146, from No. 180 to No. 194, at No. 342, resurfaced with tar, at A. I. Rome's (No. 364) cement laid, and at No. 408 and Upper Common, resurfaced with tar; Maverick street, south side at M. J. Hogan's resurfaced with tar; Middle street, from No. 36 to No. 40 resurfaced with tar; Milk street, north side from No. 67 to No. 79 resurfaced with tar; Mt. Vernon street, at No. 18, resurfaced with tar; Oliver street, at B. A. Cook's, cement laid; Pine street, north side, curbing reset at No. 21; Pleasant street, at High School and old High School, resurfaced with tar; Plymouth street, from No. 13 to Woodland street, resurfaced with tar; River street, south side at F. Rousseau's, resurfaced with cinders; Summer street, at A. B. Thomas' and J. Moran's block, resurfaced with tar; Union street, at Day street, resurfaced with tar; Water street, east side, at city scales, at No. 34, Union Machine Co.'s to Kirby's, at No. 234, A. I. Rome's, resurfaced with tar, and cinders from Duck Mill road to Bemis road; and Westminster street, at Nos. 112, 127, 143 and city stables, resurfaced with tar.

The following crosswalks were repaired: Arlington street, at Bond street; Beacon street, at Atlantic avenue; Blossom street, at Pearl street and Union street; Clinton street, at Congress street and Orange street; Congress street, at Clinton street; Fairmount street, at Clarendon street; Fox street, at Adams street; Goodrich street, at Boutelle street; Main street,

at No. 340; Myrtle avenue, at Damon street; Oliver street, at Adams street; South street, at Charles street; and Water street, at Spruce street.

Labor and material for sun-dry parties, STREETS.	Pay roll	Sundries	Total
Academy street,	27		
Arlington street,		253 04	
Ashburnham street,		73 53	
Atlantic avenue,		45 00	
Beacon street,	75	11	
Birch street,		12 36	
Blossom street,	8 80	16 19	
Bluff avenue,		247 98	
Boutelle street,	67	23	
Cedar street,	27		
Charles street,	53 00	101 82	
Crescent street,		14 24	
Cross street,		112 24	
Cushing street,	27	11	
Daniels street,	1 04	11	
Davis street,		36 92	
Day street,	42 44	121 82	
Depot street,	51 96	25 77	
East street,	54		
Elm street,	4 03	80	
Fairmount street,	4 52	66 36	
Forest street,	1 29	46	
Fox street,	52		
Goodrich street,	3 36	60 68	
Goodwin street,	5 93	1 84	
Hartwell street,	2 97		
Hawes street,		100 88	
High street,		307 76	
Highland avenue,	2 00	26 72	
Laurel street,	52	11	
Lawrence street,	116 32	57 17	
Leighton street,	27		
Lunenburg street,	1 17	34	

	Pay roll	Sundries	Total
Lyman passway,		\$49 05	
Main street,	\$83 90	347 03	
Maverick street,	27 83	27 88	
Mechanic street,	54	22	
Middle street,		31 44	
Milk street,		41 44	
Mt. Vernon street,		46 55	
Myrtle avenue,	50	11	
Oliver street,	14 68	5 85	
Pearl street,	1 31		
Pine street,	28 32	92	
Pleasant street,	1 54	86 54	
Pleasant street rapids,	54		
Plymouth street,	48 60	117 27	
Prospect street,	27	11	
River street,	19 60	3 79	
Rollstone street,	79	11	
South street,	2 52	1 50	
Summer street,	52	66 20	
Union street,		4 76	
Wallace avenue,	2 41	11	
Water street,	71 76	251 44	
West street,	77	22	
Westminster street,		33 96	
Total sidewalks,			\$3,410 40

CROSSWALKS.

Arlington street,	7 92	65
Beacon street,	17 00	4 77
Blossom street,	17 74	5 68
Clinton street,	13 41	
Congress street,	8 58	
Daniels street,	25	11
Fairmount street,	14 23	
Fox street,	14 64	
Goodrich street,	9 76	
Main street,	2 72	22
Myrtle avenue,	4 20	
Oliver street,	22 21	
South street,	22 36	

	Pay roll	Sundries	Total
Water street,	\$8 34		
Total crosswalks,			\$174 79
PLANKWALK.			
Longwood avenue,	1 50	\$1 79	3 29
	<hr/>	<hr/>	<hr/>
	\$932 10	\$2,942 04	\$3,874 14

STREET CONSTRUCTION.

The following streets were constructed:—Charles street from South street to Crown street (land damage to Michael Burns, \$3,750, and to McNamara and Coughlin, \$991.90); Clifton street, from Walton street to Rollstone street; Columbus street, from Fairmount street southerly to Plymouth street; Derby court, from Summer street to B. and M. R. R.; Fairmount street, from Columbus street to Depot street (grade changed); Fairmount street, from Charles street to Thomas street; Gage street place, from Gage street northerly; Hartford street (lowered on account of sidewalk); Highland avenue (corner on east side at Lunenburg street, taken); Hobson street (gutter paved and cinder walk built); Klondike avenue, from Lunenburg street northerly; Lowe passway, (culvert built); Maverick street, from Summer street to Boutelle street; Thorndike street, from Klondike avenue easterly; View street, north side (gutter paved from Bond street easterly).

Back curb was set on Highland avenue at F. R. Choate's, also on South street at various places from Charles street to Elizabeth street.

A culvert was extended on the land purchased of Henry Roddy, off Salem street.

Fences were constructed on the following streets:—Bond street, east side, from View street southerly at G. R. Wallace's; Payson street, north side at R. Bean's; Spruce street, north side at S. F. Lynch's, and Water street, east side at Arden Mills.

The following walls were built:—Ashburnham street, east side from Westminster Hill road, southerly; Bond street, east side, from View street southerly, at G. R. Wallace's; Daniels street, north side, from Madison street easterly; Leighton street,

north side, from Beech street easterly; Lowe passway, north side, at W. A. Lowe's; Maverick street, north side, from Summer street, easterly; Payson street, north side, at Robert Bean's; South street, east side, from Thomas street, northerly; View street, north side, from Bond street easterly at C. T. Crocker's; Water street, east side, from Adren Mill crossing southerly, and Westminster Hill road, north side, from Ashburnham street easterly.

Order No.		Pay roll	Sundries	Total
	Balance, Dec. 1, 1910,		\$215 78	
	Accounts abated,		15 00	
STREETS.				
	Boylston street, (B.)			
	E. Sawyer),		347 06	\$347 06
	Charles street,	\$22 16	1,741 90	
	Charles Street, fence (painting),	12 04	3 39	
				1,779 49
701	Clifton street,	1,417 59	140 29	1,557 88
1250	Columbus street,	88 82	5 30	94 12
1133	Connors street, cinder walk,	8 95	2 30	
	Connors street, gut- ter-paving,	118 22	19 64	
				149 11
	Derby court,	122 10	13 00	135 10
1168-10	Fairmount street,	1,827 35	458 73	
	Fairmount street, fence,	6 16	8 48	
	Fairmount street, grate,		12 00	
				2,312 72
	Federal street, (John Weidlich)		15 00	15 00
851	Francis street,	230 78	32 40	
	Francis street, cul- vert (pipe),	2 16	2 17	
	Francis street, gut- ter paving,	211 73	17 85	
				497 09

Order No.		Pay roll	Sundries	Total
849	Gage Street place, culvert,		\$1 71	
	Gage Street place, grate,		2 00	
	Gage Street place, gutter paving,	\$57 48	7 08	
	Gage Street place, fence,	2 25	5 60	
	Gage Street place, steps,	39 67	47 03	
	Gage Street place, wall,	111 76	23 00	
				\$297 58
	Grand street, (R. E Waters,)		300 00	300 00
	Hartford street,	162 21	8 96	171 17
	Highland avenue,	155 27	57 72	
	Highland avenue, catch-basin,		96 29	
	Highland avenue, sodding bank,	6 00		
				315 28
762	Hobson street,	126 21	31 60	
	Hobson street, cinder walk,	21 04	5 52	
	Hobson street, gutter-paving,	80 90	26 08	
				291 35
	Kelley avenue,		4 93	4 93
905	Klondike avenue,	440 13	35 75	
	Klondike avenue, fence,	2 50	28 58	
				506 96
907-10	Lowe passway,	19 47	2 53	
	Lowe passway, culvert,	62 36	1 38	
				85 74
702	Maverick street,	299 94	76 18	376 12
852	Redman place,	35 68	88	36 56

Order No.		Pay roll	Sundries	Total
	Thomas street, gutter-paving,	\$25 80		\$25 80
1010	Thorndike street,	371 64	\$14 18	385 82
761	View street,	38 71	4 00	
	View street, gut- ter-paving,	46 74	7 85	
				97 30
	Total streets,			\$9,782 18
	BACK CURB.			
	Highland avenue,	15 65	18 24	
	South street,	617 59	702 68	
				1,354 16
	CULVERTS.			
200	Salem street,	174 09	224 58	398 67
	FENCES.			
	Posts,		14 73	
	Bond street,	56 95	76 21	
	Payson street,	32 85	63 37	
	Spruce street,	9 88	2 48	
	Water street,	14 63		
				271 10
	STEPS.			
	South street (No. 86),	4 51	16 00	20 51
	WALLS.			
	Ashburnham street,	171 00	316 15	
	Ashburnham street, excavating,	32 88		
	Ashburnham street, laying,	23 80		
				543 83
823	Bond street,	217 80	33 13	
	Bond street, coping,	54 26	336 51	
	Bond street, grouting,	24 71	23	
	Bond street, moving dirt,	20 98		
				687 62

Order No.		Pay roll	Sundries	Total
	Daniels street,	\$32 58	\$22 96	
	Daniels street, excavating,	55 81		
	Daniels street, laying,	63 07		\$174 42
	Leighton street,	82 35	115 21	197 56
	Lowe passway,	32 00	6 20	38 20
	Maverick street,	93 17	87 58	180 75
	Payson street,	292 36	324 65	
	Payson street, moving dirt,	13 95		630 96
	South street,	126 12	127 43	253 55
	View street,	18 46	83 70	
	View street, excavating,	79 03		
	View street laying,	92 08		273 27
	Water street,	330 96	557 48	888 44
	Westminster Hill road,	113 96	36 49	150 45
	Total walls,			\$4,019 05
		\$9,071 30	\$7,005 15	\$16,076 45

STREET MAINTENANCE.

Back curb was put in on Second street on the south side from Water street lane, westerly, and on Water street lane on the east side from Second street, southerly.

The following bridges were repaired: Kimball street, roadway resurfaced with cement concrete; Melrose street, new sills and plank; Orswell Mill, resurfaced with cement concrete; Townsend street, new sills and replanked; Water street, No. 1, walks replanked, and covered with tar concrete; Falulah road, No. 1, planked; No. 3, surfaced with cement concrete; Princeton road, replanked; Richardson road, replanked; So. County road, replanked, and Turnpike road, replanked.

The following cinder walks were repaired: Arlington street, north side from School street to Prospect street; Ash street, north side from Milk street to Linden street; Ashburnham street, west side from Westminster street to Westminster Hill road, and east side from Wall street to Pratt road; Blossom street, west side from Gage street to Hawes street; Bond street, east side, from View street to tar walk; Boyle court, east side from Spruce street, southerly; Burnap street, east side from Pine street, southerly; Cane street, north side from Summer street to Boylston street; Circle street, south side from bridge to Mill A; Clarendon street, east side from Daniels street to Franklin road; Congress street, north side from Clinton street to Myrtle avenue; Culley street, south side; Daniels street, from Chester street, easterly; Depot street, east side from Fairmount street, southerly; Dover street, east side from Melrose street, southerly; East street, west side from F. River's; Eaton street, from No. 87 to Westminster Hill road; Exeter street, from Oak Hill road, 300 feet southerly; Fairmount street, west side from Daniels street to Kimball street; Forest street, west side from Williams street to Charles street; Fulton street, west side from Cane street, northerly; Hawes street, south side from Mt. Vernon street, easterly; Hobson street, both sides; Longwood avenue, east side from Pearl street to Fitch Hill avenue; Madison street, east side from Daniels street to Legros street; Marshall street, east side, from Beckwith street to Bailey street; Munroe street, from Birch street, southerly; Pacific street, east side from Pearl Hill road to Pearl street; Pleasant street, south side from Spring street, westerly; Pratt street, south side from Harugari street, westerly; River street, south side from Daniels street to Tin bridge; Rollstone street, west side from Charles street to John street; Salem street, west side from Heywood street to Birch street; Summer street, east side from Boutelle street to Gillin's; Temple street, east side from Westminster street, northerly; Wachusett street, north side from Westminster street, westerly; Warren street, east side from Pine street, southerly 800 feet; Water street, east side from Duck Mill road to Bemis road; Westminster street, east side from Steamer House, southerly; Oak Hill road, west side from Daniels street to Pratt road, and Pratt road south side from Exeter street to Madison street.

The following culverts were repaired: Cascade street, west side, changed; Clarendon street, at No. 184; Daniels street, pipe extended at Oak Hill road; Essex street at High street; Fairmount street, near coal yard; St. Joseph avenue from Oak Hill road to Columbus street; Ashburnham Hill road, at Williams road, Ashby West road and Caswell road; Bemis road at Duck Mill tail race; Oak Hill road west side near Daniels street, land of N. M. Deschenes, and opposite Exeter street, and Mt. Elam road at Cook's.

The following fences were repaired: Allen street, west side from Huron street, southerly; Crown street, east side from Nashua street to Charles street; Grand street, north side from Norwood street to Mayland street; Johnson street, south side from Elm street to Omena place; Leighton street, north side from Beech street, easterly; Mechanic street, east side at Elm street; Pacific street, east side from Pearl Hill road, southerly; Payson street, north side at Bean's; River street, south side at Mill C; Salem street, east side from Birch street, southerly, at dump; and corner Spruce street; Summer street, south side from Bemis road, easterly; Water street, east side at Arden Mills, and from Bemis road, northerly, and Wanoosnoc road at power station.

The following grates were built: Market street, at Sheridan street; River street, at F. F. Woodward & Co.'s; and Townsend street, at No. 89.

Gutters were paved in the following streets: Allen street, west side, at N. M. Deschene's; Ashburnham street, east side, from Westminster Hill road southerly; Canton street, east side, at brick yard, and at John Viau's; Federal street, south side, from Rockland street easterly; Hawes street, south side, from sidewalk westerly; Laurel street, south side, from Rollstone street to sidewalk; Nashua street, south side, from Crown street westerly; Newton street, north side, from Water street westerly; Plymouth street, west side, from Woodland street easterly; Pratt street, south side, from Harugari street westerly; Prospect street, west side, at C. T. Crocker, Jr.'s; South street, east side, at Heywood street; Union street, north side, from Blossom street easterly; View street, both sides, from Bond street easterly; Wachusett street, north side, at No. 84; Ward street, east side, at No. 38; Water street lane, east side, from Second

street southerly; Westminster street, east side, from Cascade street to Wachusett street; Wilmot street, west side, from Luenburg street southerly; Woodland street, east side, from Fairmount street southerly; Bemis road, west side, at Market street; and Pearl Hill road, west side, at James Heslam's.

The following walls were built: Allston place, at No. 29; Federal street, north side, from Rockland street easterly; Leighton street, north side, from Beech street easterly; Rockland street, east side, from Federal street southerly; and Westminster Hill road, at Terrace place.

The following streets were repaired: Allen street, capped with cinders from Daniels street to Huron street; Ashburnham street, capped from Westminster Hill road northerly; Beech street, capped with gravel from Huron street southerly; Blossom street, capped with cinders from Pearl street northerly. Boutelle street, capped with gravel from Goodrich street northerly; Broad street, capped with gravel; Cross street, capped with gravel; Davis street, capped with cinders; Dover street, capped with gravel from Sheridan street easterly; Elm street, capped with cinders from church northerly; Essex street, capped with cinders; Forest street, capped with gravel from Charles street to Maple street; Foster street, capped with cinders; Franklin street, capped with cinders; Hobson street, capped with cinders; Holt street, covered with stone dust; Jay street, capped with cinders; Johnson street, capped with cinders from High street to Marshall street; Laurel street, capped with gravel from Charles street to Rollstone street; Leighton street, lowered above Fitzgerald's; North street, capped with cinders and pipe put in on land of R. Proctor at Rindge road; Payson street, capped from Milk street easterly; Pearl street, capped with gravel from Day street easterly; Ross street, capped and widened at H. G. Townend's; Salem street, repaired from Birch street to Heywood street; Simonds street, capped from from Marshall street easterly; South street, capped with gravel from Wanoosnoc road northerly; Townsend street, capped with gravel from Luenburg street to bridge; Union street, capped from Blossom street to Day street; Walton street, capped with gravel from Mt. Elam road to Clifton street; and Willow street, capped with gravel from Main street northerly.

	Pay roll	Sundries	Total
Auto hire,		\$61 63	
BACK CURB.			
Second street,	\$10 28		
Water street lane,	1 82		
			\$12 10
Blacksmithing,		356 63	
BRIDGE REPAIRS.			
Ashburnham street,		7 73	
Kimball place (Foot bridge)	3 62		
Kimball street,	172 60	280 89	
Market street,		2 50	
Melrose street,	70 39	7 12	
Orswell Mill,	200 46	91 53	
Rollstone street,	3 50		
Sheldon street,	3 64	3 34	
Townsend street,	20 73	48 54	
Water street, No. 1,	20 00	250 67	
Ashby West road,	3 12		
Falulah road, No. 1,	5 22	8 31	
Falulah road, No. 2,	1 00		
Falulah road, No. 3,	225 60	389 11	
Mt. Elam road,	76		
Oak Hill road,	1 35		
Princeton road,	5 50	42 00	
Richardson road,	1 50	11 45	
Rindge road,		1 95	
Scott road,	75		
South County road,	41 44	122 49	
Townsend road,	1 00		
Turnpike road,	4 77	57 03	
			2,111 61
Cart and sled repairs,	281 34	440 09	
Care of barn,	1,891 48	32 08	
Care of barn W. F.	216 00		
Care of section No. 2,	23 58		
Care of snow and ice;	1,987 34	3 00	
Care of snow and ice, W. F.	517 98		
Care of subway,	11 45	1 50	

CINDER WALKS.	Pay roll	Sundries	Total
Allen street,	\$ 50		
Arlington street,	9 08		
Ash street,	8 86		
Ashburnham street,	50 31		
Beech street,	96 94		
Blossom street,	3 10		
Bond street,	5 55	\$3 26	
Boyle court,	3 16		
Burnap street,	6 81		
Cane street,	16 32		
Circle street,	9 36		
Clarendon street,	120 15		
Connors street,	61 92	5 70	
Crescent street,	1 02		
Culley street,	22 18		
Daniels street,	19 56		
Day street,	4 12		
Depot street,	25 79		
Dover street,	11 25		
Dumais street,	79		
East street,	15 99		
Eaton street,	15 54		
Edward street,	2 60		
Elm street,	1 62		
Essex street,	5 76		
Exeter street,	55 89		
Fairmount street,	68 59		
Forest street,	5 10		
Franklin street,	1 25		
Fulton street,	11 52		
Hale street,	1 58		
Hawes street,	5 82		
Heywood street,	28 89		
Hobson street,	41 80		
Longwood avenue,	6 45		
Madison street,	247 16	4 60	
Market street,	2 31		
Marshall street,	16 01		

	Pay roll	Sundries	Total
Mt. Vernon street,	\$55 77		
Munroe street,	7 70		
Pacific street,	92 06		
Pleasant street,	7 74		
Pratt street,	28 64	\$10 24	
River street,	32 84		
Rollstone street,	37 70		
Roosevelt street,	8 52		
Salem street,	44 00		
South street,	1 58		
Summer street,	128 79		
Temple street,	25 19		
Union street,	2 06		
View street,	1 89	3 36	
Wachusetts street,	32 64		
Warren street,	3 81		
Water street,	28 82		
Westminster street,	124 58		
Woodland street,	1 89		
Oak Hill road,	30 16	50	
Pratt street,	158 30	2 60	
			\$1,895 59
Cleaning cross-walks,	28 50		
Cleaning cross-walks, W. F.	75		
Cleaning gutters, W. F.	1,321 48		
Cleaning gutters,	3,088 50		
Coal and wood,		9 38	
Collecting ashes,	2,657 75	20 31	
Collecting ashes, W. F.	686 78		
Collecting rubbish,	1,409 78		
Collecting rubbish, W. F.	75 54		
Commissioners,	900 00		
Commissioners' clerk,	100 00		
CULVERTS.			
Beech street,	4 30		
Blossom street,	50		
Carey street,		11 70	
Cascade street,	37 08		
Clarendon street,	5 41		

	Pay roll	Sundries	Total
Connors street,	\$2 12		
Daniels street,	10 25		
Essex street,	66 09		
Fairmount street,	48 25		
Foster street,	1 54		
Kimball street,	91		
Leighton street,	6 15		
Main street,	50		
Munroe street,	1 58		
Pearl street,	8 45		
St. Joseph avenue,	78 43	\$2 78	
Ashby West road,	2 08		
Ashburnham Hill road,	57 62		
Bemis road,	13 35	12 34	
Mt. Elam road,	5 10		
Oak Hill road,	75 24	45 29	
Pratt road,	3 85		
Richardson road,	2 60		
Scott road,	3 12		
			\$506 63
Disabled on works,	55 84		
Dynamite, powder and fuse,		36 50	
Electric light,		79 19	

FENCES.

Posts,		48 00
Posts, cutting,	75 07	
Posts, peeling,	3 02	
Academy street,	1 89	25
Allen street,	4 50	
Arlington street,	1 04	85
Ashburnham street,	77	
Burnett street (painting),	4 50	
Circle street,	50	
Crescent street,		63
Crown street,	8 40	8 04
Daniels street,	2 00	3 54
Edward street,		5 96
Elm street,	50	
Essex street,	27	

	Pay roll	Sundries	Total
Federal street,	\$1 04		
Franklin street,	1 81		
Goddard street,	25		
Grand street,	6 50	\$8 07	
Grove street,	1 00	55	
High street,	77		
Jay street,	2 50	1 45	
Johnson street,	6 76	6 04	
Kimball street,	4 18		
Laurel street,	68		
Leighton street,	12 52	39 07	
Madison street,	6 24	1 03	
Main street,	1 04		
Maple street,	1 04	2 41	
Mechanic street,	2 37		
Melrose street,	50		
Mt. Globe street,	2 50		
Myrtle avenue,	50		
Nashua street,	6 29	93	
Pacific street,	28 76	29 70	
Payson street,	7 20	6 76	
Payson street (painting),	9 35		
Pearl street,	1 81		
Pleasant street rapids,	2 08	3 25	
River street,	49 37	86 66	
River street (painting),	75		
Rollstone street,	50	2 61	
Salem street,	8 47	15 42	
Salome street,	50		
School street,	77		
Sheldon street,	2 00		
Spring street,	52		
Summer street,	14 56	14 73	
Wallace street,	1 04		
Water street,	158 98	362 65	
Water street (painting),	48 41		
West street,		4 39	
Wanoosnoc road,	13 09		
			\$1,162 10

	Pay roll	Sundries	Total
Fitchburg & Leominster St.			
Ry. Co.,	\$21 05	\$6 00	
Freight and express,		1 70	
General repairs, W. F.,	91 89		
General repairs,	407 91	3 65	
GRATES.			
Market street,		6 00	
River street,		16 50	
Townsend street,	18 36	32 19	
			\$73 05

GUTTER PAVING.

Allen street,	21 27	20
Ashburnham street,	189 05	41 76
Canton street,	52 34	
Cedar street,	3 60	
Cottage street,	18 00	
Federal street,	21 09	1 00
Hawes street,	22 40	60
Laurel street,	139 73	
Longwood avenue,	4 37	
Mechanic street,	4 00	
Myrtle avenue,	4 60	
Nashua street,	43 06	10
Newton street,	50 19	
Plymouth street,	28 44	70
Pratt street,	13 52	
Prospect street,	8 80	10
South street,	4 09	
Union street,	9 25	10
Upland street,	2 46	
Vernon street,	2 50	
View street,	59 45	4 80
Wachusett street,	23 44	
Wall street,	2 41	
Ward street,	26 00	
Water street lane,	11 05	
Westminster street,	187 55	19 72
Wilmot street,	11 36	7 89
Woodland street,	42 16	1 00

	Pay roll	Sundries	Total
Bemis road,	\$12 93		
Oak Hill road,	6 56		
Pearl Hill road,	7 62		
			\$1,111 26
Hardware,		\$517 44	
Harness and repairs,	125 77	362 93	
Hay, grain and straw,	188 77	3,848 22	
Horses and horse hire,	288 75	325 60	
Insurance,	1 89	59 20	
Kerosene and oils,		42 35	
Labor and material for sun- dry parties,	281 26	19 11	
Lumber and woodwork,		48 68	
Office expenses,	1,570 08	106 06	
Printing and stationery,		69 85	

REMOVING TREES AND BRUSH.

Charles street,	50		
Culley street,	5 50		
Grove street,	61		
Heywood street,	75		
High street,	52		
Highland avenue,	50		
Prichard street,	1 54		
Franklin road,	14 00		
Oak Hill road,	43 74		
Pearl Hill road,	1 50		
Princeton road,	9 44		
South County road,	41 59		
Westminster Hill road,	7 36		
			127 55

Road machine repairs,		1 50	
Sanding walks, W. F.	60 91		
Sanding walks,	173 59	100 27	
Shoeing,	32 15	635 60	

STEPS.

Ashburnham street, (W. A. Hartwell)		46 09
Granite street, (Nos. 4, 51, 55)	5 92	18 20

	Pay roll	Sundries	Total
Washington street, (No. 27),		\$3 20	
			\$73 41

Street signs,	\$173 48	201 34
Street sweeper repairs,		50
Sundry accounts,		192 28
Superintendent of Streets,	1,500 00	
Telephone,		107 65
Tickets,		200 00

WALLS.

Allston place,	12 39	
Blossom street,	1 04	
Circle street,	2 50	
Crescent street,	3 39	
Federal street,	43 64	78 88
Kelley avenue,	5 00	
Leighton street,	15 14	
Lunenburg street,	54	
Mill street,	81	
Rockland street,	160 91	18 55
Wanoosnoc road,	10 78	
Westminster Hill road,	43 26	
		396 83

STREETS.

Albee street,	5 68	
Allen street,	24 99	
Ashburnham street,	96 82	
Atlantic avenue,	1 02	
Beech street,	146 83	40
Blais court,	50	
Birch street,	18 82	
Blossom street,	284 28	
Bond street,	1 56	
Boutelle street,	68 74	12 50
Brook street,	1 31	
Broad street,	26 11	53 50
Burnap street,	5 72	
Canton street,	7 47	
Charles street,	3 85	
Clarendon street,	21 90	

	Pay roll	Sundries	Total
Columbus street,	\$81 42		
Crescent street,	1 04		
Cross street,	32 40		
Culley street,	1 04		
Daniels street,	3 29		
Davis street,	14 60		
Depot street,	20 33	\$ 63	
Dover street,	12 48	1 20	
Elm street,	59 14		
Essex street,	69 98		
Exeter street,	43 62		
Fairmount street,	25		
Federal street,	1 83		
Forest street,	41 58		
Foster street,	18 48		
Franklin street,	137 07		
Gage street,	6 12		
Green street,	1 54		
Hazel street,	6 12		
Heywood street,	7 47		
High street,	4 12		
Hobson street,	23 73		
Holt street,	6 68	10 44	
Huron street,	10 02		
Jay street,	16 32		
Johnson street,	58 78		
King street,	50		
Lawrence street,	2 60	10 00	
Laurel street,	23 20		
Leighton street,	130 60		
Madison street,	19 74		
Main street,	13 16		
Market street,	17 04		
Marshall street,	41 90		
Martel street,	75 50		
Maverick street,	4 52	50	
Melrose street,	10 82		
Mt. Vernon street,	1 31		
Munroe street,	11 81		

	Pay roll	Sundries	Total
Newton street,	\$19 88		
North street,	157 06		
Pacific street,	15 07		
Payson street,	25 28		
Pearl street,	30 61	\$71 00	
Pine street,	7 89		
Pratt street,	17 94		
Rindge street,	2 31		
Rollstone street,	1 56		
Ross street,	151 18		
Salem street,	62 36		
Sanborn street,	8 15		
Second street,	6 58		
Simonds street,	54 80		
South street,	238 24		
St. Bernard street,	12 78		
St. Joseph avenue,	5 43		
Summer street	27 25		
Townsend street,	31 72	71 50	
Union street,	14 74		
Wall street,	9 27		
Wallace street,	75 53		
Walton street,	77 73	7 00	
Warren street,	14 30		
Water street lane,	14 95		
West street,	4 00		
Westminster street,		7 50	
Willow street,	9 88	32 00	
Wilmot street,	2 60		
Winter street,	86	10	
			\$3,125 97

ROADS.

Alpine road,	87 78	
Ashburnham Hill road,	667 12	25 90
Ashby West road,	162 40	
Bemis road,	359 57	2 45
Billings road,	116 32	
Caswell road,	145 73	
Damon road,	21 28	

	Pay roll	Sundries	Total
Fisher road,	\$353 09		
Falulah road,	3 08		
Franklin road,	100 04		
Kendall road,	5 68		
Kinsman road,	78 33	\$4 00	
Marshall road,	58 59		
Mt. Elam road,	106 90		
Oak Hill road,	676 28	40 40	
Old Princeton road,	26 88		
Pearl Hill road,	225 70		
Pratt road,	150 30	4 30	
Princeton road,	90 59		
Richardson road,	235 29	3 00	
Ridge road,	43 94		
Saw Mill road,	14 20		
Scott road,	16 02		
Sheldon road,	46 46		
South County road,	97 47		
Stickney road,	64 12		
Thurston road,	20 04		
Townsend road,	92 07		
Turnpike road,	442 76	14 10	
Wanoosnoc road,	100 62		
Westminster Hill road,	75 46		
Williams road,	61 76		
			\$4,840 02
	-----	-----	-----
	\$32,857 69	\$10,640 26	\$43,497 95

STREET WATERING AND OILING.

The past season was very dry, and the use of water for sprinkling the streets was forbidden by the Water Department.

Oil was used at various times during the season. The first application was made by the Street Department with oil from the Standard Oil Company of New York, applied with a cart from the Standard Oil Company. Cost of oil was \$.0415 per gallon and freight.

The second application was made by the American Car Sprinkler Company of Worcester at a cost of \$.012 per square yard, including oil.

The assessment for watering or oiling was advanced to three cents per front foot, charged to the abutter.

WATERING.

	Pay roll	Sundries	Total
Cart repairs,	\$242 78	\$437 37	
Watering streets,	4,842 66	125 99	
Watering streets, W. F.,	272 81	16 90	
			\$5,938 51

OILING.

General repairs,	3 04	
Freight and express,		66 31
Labor and material for sun- dry parties,	9 94	8 03
Standard Oil Company,		528 66
Street maintenance,		92
Sundries,		80 02

STREETS.

Academy street,	82	
Adams street,		10 31
Arlington street,	6 95	1 15
Ashburnham street,	1 28	80 45
Atlantic avenue,	64	20 14
Beacon street,	32	20 28
Blossom street,	64	54 86
Bluff avenue,	32	12 96
Bond street,	32	13 68
Boutelle street,	32	46 96
Bringham street,		8 60
Bringham park,		14 33
Broad street,	32	13 40
Cedar street,	64	46 30
Central street,		7 10
Cherry street,	1 09	23
Cleghorn street,	32	19 40
Clinton street,	32	29 17
Congress street,		31 16
Congress place,		8 50
Concord street,		8 25
Cottage square,	1 09	23
Damon street,	32	4 08

	Pay roll	Sundries	Total
Daniels street,	\$ 32	\$59 76	
Day street,	6 36	34 77	
East street,	32	20 12	
Elm street,	3 27	45 25	
First street,		12 24	
Forest street,	32		
Fox street,	1 41	12 54	
Granite street,		8 40	
Green street,	1 41	19 96	
Grove street,	59	8 60	
Harrison avenue,		22 54	
Hancock street,		10 37	
Hartwell street,	82	12 47	
Harvard street,		14 19	
High street,	32	45 17	
Highland avenue,	5 36	92	
Holt street,	2 95	5 66	
Howard street,		6 10	
Kimball street,	9 95	113 59	
Lawrence street,		30 44	
Lincoln street,	32	31 15	
Linden street,	32	11 52	
Main street,	4 05	124 31	
Maverick street,	32	13 99	
Mechanic street,	11 82	145 58	
Middle street,	32	24 77	
Mill street,		3 94	
Mt. Vernon street,	7 95	1 15	
Myrtle avenue,	4 36	92	
Nashua street,	32	32 41	
Newton place,	1 09	23	
North street,	3 59	25 62	
Oak street,	32	12 11	
Oliver street,	2 28	19 56	
Orange street,	32	21 90	
Otis street,		6 74	
Pacific street,		26 84	
Pearl street,	32	49 58	
Pleasant street,	64	56 39	

	Pay roll	Sundries	Total
Prescott street,		\$15 84	
Prince street,	\$ 32	3 90	
Prichard street,	2 18	21 23	
Prospect street,	7 95	1 15	
Putnam street,		5 20	
River street,	64	43 25	
Rollstone street,	1 09	23	
Salem street,		25 97	
Second street,		8 66	
Snow street,	1 41	33 20	
South street,	1 28	62 14	
Summer street,	1 28	118 65	
Third street,		11 11	
Townsend street,	32	35 99	
Wallace avenue,	11 77	69	
Walnut street,	32	20 80	
Walton street,	32	26 02	
Water street,	1 28	199 29	
West street,	32	14 88	
Westminster street,	10 64	188 20	
Willow street,		23 82	
Winter street,		20 13	
Winthrop street,	32	3 25	
		\$3,252 75	
	\$5,500 12	\$3,691 14	\$9,191 26

FIFTH STREET BRIDGE CONSTRUCTION.

	Pay roll	Sundries	Total
Labor, Fifth street,	\$5 00		
Engineering department,		\$1 25	
Engineering News,		115 20	
Engineering Record,		98 10	
Fitchburg Daily News,		5 63	
Fitchburg Sentinel,		5 25	
James H. Fuertes,		1,300 00	
McHarg-Barton Co.		4,102 09	
Municipal Journal,		55 50	
T. J. Sheehan,		27 32	
H. L. Sherman,		16 00	
	\$5 00	\$5,726 34	\$5,731 34

SUMMARY.

	Pay roll	Sundries	Total
Macadam construction,	\$2,567 88	\$2,507 82	\$5,075 70
Macadam maintenance,	7,054 89	8,117 01	15,171 90
Paving construction,	6,817 37	9,943 96	16,761 33
Paving maintenance,	8,598 78	1,035 14	9,633 92
Sewer construction,	215 60	48 26	263 86
Sewer maintenance,	963 43	213 51	1,176 94
Sidewalk construction,	10,591 74	8,488 14	19,079 88
Sidewalk maintenance,	932 10	2,942 04	3,874 14
Street construction,	9,071 30	7,005 15	16,076 45
Street maintenance,	32,857 69	10,640 26	43,497 95
Street watering and oiling,	5,500 12	3,691 14	9,191 26
Fifth street bridge construction,	5 00	5,726 34	5,731 34
	<hr/>	<hr/>	<hr/>
	\$85,175 90	\$60,358 77	\$145,534 67

RECAPITULATION.

MACADAM CONSTRUCTION.

Expenditures,	\$4,907 39
Minor transfers,	161 81
Service transfers,	6 50
Receipts, cash,	\$65 65
Service transfer,	26 99
Loan,	4,854 36
Debts receivable,	128 70
	<hr/>
	\$5,075 70
	<hr/>
	\$5,075 70

MACADAM MAINTENANCE.

Expenditures,	\$14,810 18
Minor transfers,	361 72
Appropriation,	\$4,000 00
Transfer (liquor license)	6,000 00
Receipts, cash,	1,955 92
Service transfers,	23 91
Debts receivable,	246 52
To balance,	2,945 55
	<hr/>
	\$15,171 90
	<hr/>
	\$15,171 90

PAVING CONSTRUCTION.

Expenditures,	\$16,617 06
Minor transfers,	121 97
Service transfers,	22 30
Balance, Dec. 1, 1910,	\$1,314 58
Loan,	14,802 84
Receipts, cash,	213 58
Minor transfers,	204 00
Debts receivable,	226 33
	<hr/>
	\$16,761 33
	<hr/>
	\$16,761 33

PAVING MAINTENANCE.

Expenditures,	\$9,275 64
Minor transfers,	358 28
Appropriation,	\$6,000 00
Transfer (liquor license),	1,000 00
Receipts, cash,	293 85
Debts receivable,	33 14
To balance,	2,306 93
	<hr/>
	\$9,633 92
	<hr/>
	\$9,633 92

SIDEWALK CONSTRUCTION.

Balance, Dec. 1, 1910,	\$723 34
Expenditures,	17,567 64
Minor transfers,	510 22
Service transfer,	278 68
Assessments,	\$5,133 38
Loan,	13,145 40
Receipts, cash,	386 09
Service transfers,	38 42
Debts receivable,	376 59
	<hr/>
	\$19,079 88
	<hr/>
	\$19,079 88

SIDEWALK MAINTENANCE.

Expenditures,	\$3,808 25
Minor transfers,	65 89
Appropriation,	\$3,500 00
Receipts, cash,	211 33
Service transfers,	3 38
Debts receivable,	219 99
By balance,	60 56
	<hr/>
	\$3,934 70
	<hr/>
	\$3,934 70

STREET CONSTRUCTION.

Balance, Dec. 1, 1910,	\$215 78
Expenditures,	15,115 68
Minor transfers,	444 60
Service transfers,	300 39
Betterments,	\$915 81
Loan,	15,155 60
Receipts, cash,	3 44
Debts receivable,	21
To balance,	1 39

	\$16,076 45

	\$16,076 45

STREET MAINTENANCE.

Expenditures,	\$43,494 45
Minor transfers,	3 50
Appropriation,	\$32,000 00
Receipts; cash,	191 36
Minor transfers,	1,944 85
Service transfers,	99 80
Street railway excise tax,	3,053 56
Street railway franchise tax,	4,263 31
Debts receivable,	354 43
To balance,	1,590 64

	\$43,497 95

	\$43,497 95

STREET WATERING AND OILING.

Expenditures,	\$9,144 70
Minor transfers,	46 56
Appropriation,	\$1,500 00
Assessments,	7,958 77
Receipts, cash,	61 51
Debts receivable,	33 94
By balance,	362 96

	\$9,554 22

	\$9,554 22

FIFTH STREET BRIDGE.

Expenditures,	\$5,731 34	
Loan,		\$5,731 34
	\$5,731 34	5,731 34

SEWER CONSTRUCTION.

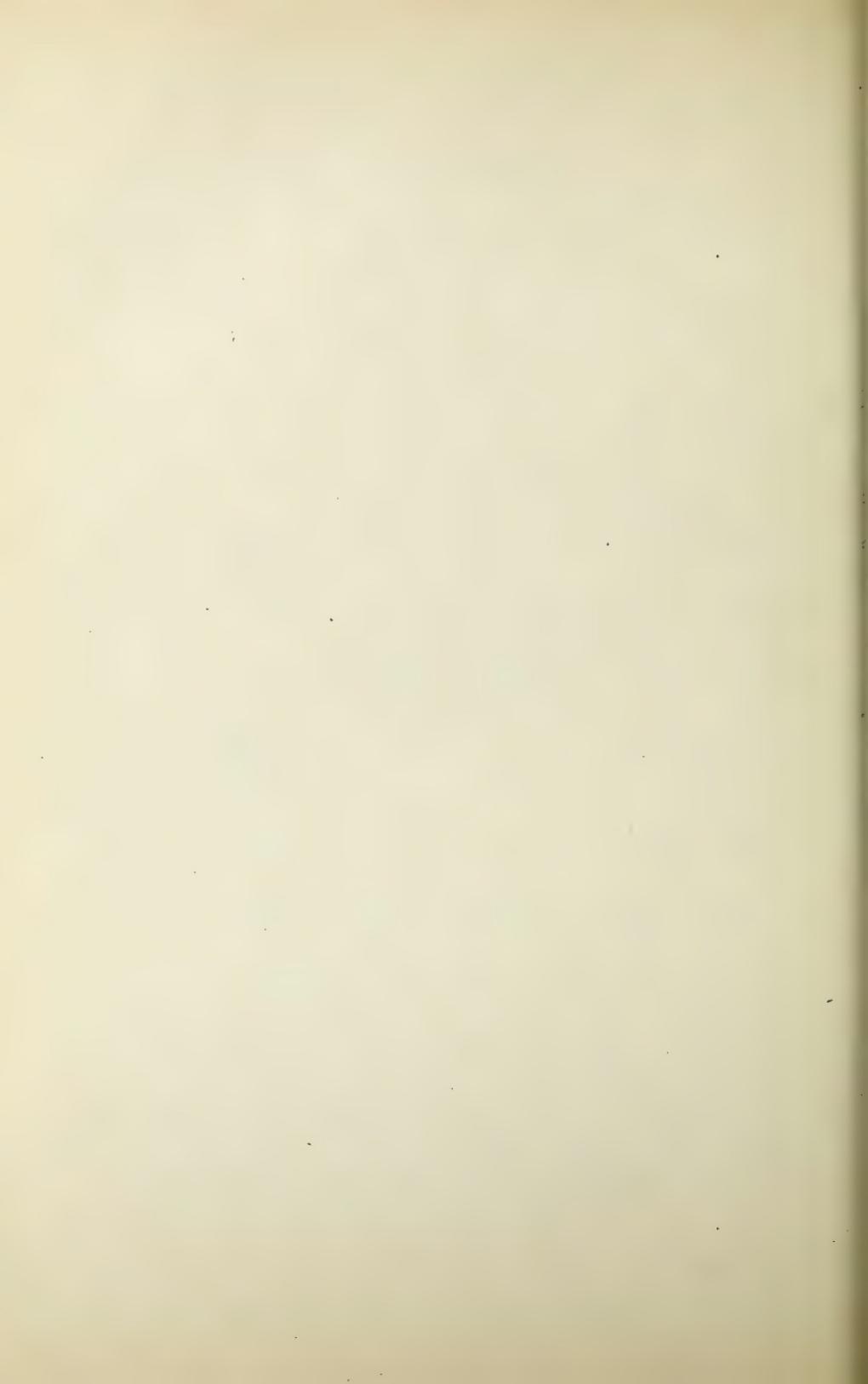
Balance, Dec. 1, 1910,		\$165 51
Expenditures,	\$261 94	
Minor transfers,	1 92	
Assessments,		106 84
Receipts, cash,		60 78
By balance,	69 27	
	\$333 13	\$333 13

Transferred to Sewer Department, June 1, 1911.

SEWER MAINTENANCE.

Expenditures,	\$1,111 25	
Minor transfers,	65 69	
Appropriation,		\$3,500 00
Receipts, cash,		80 02
By balance,	2,403 08	
	\$3,580 02	\$3,580 02

Transferred to Sewer Department, June 1, 1911.



INVENTORY

CITY STABLES

34 asphalt binder, bbls.,	\$136 00
20 augers,	10 00
4 axes, hand,	2 00
1 axe, with pick,	1 00
5 axes, wood,	2 50
3 axles, cart, old,	3 00
15 bags, feed,	11 25
31 barrels, tarvia, mt.,	15 50
31 bars, crow,	31 00
6 bars, pinch,	1 50
2 bars, pick,	1 00
5 baskets, two bushel,	2 50
1 basket, one bushel,	50
1 bellows,	2 00
16 bells,	4 00
1 belt punch,	75
2 benches, wood,	10 00
19 bits,	1 90
4 bitstocks,	2 00
16 blankets, storm,	105 00
1 blanket, oilcloth,	3 00
2 blankets, street,	8 00
19 blankets, barn,	9 50
1 boiler, steam, "Ames,"	150 00
1 boiler steam, "Dillon,"	150 00
1 bolt cutter,	3 00
1 bolts, old lot,	2 00
10 bolts, lbs.,	1 00
65 bolts, 5-16 x 2½,	1 30
33 bolts, 5/8 x 5,	1 32
17 bolts, 5/8 x 4½,	68
50 bolts, 3/8 x 2,	75

50 bolts,	\$1 00
1 boom seat,	2 50
1 boot, gall,	1 00
1 boot, interfering,	50
1 boot, knee,	50
1 boot, roll,	1 00
1 boot, soaking,	50
4 boxes, feed,	8 00
2 boxes, scale,	8 00
7 boxes, tool,	35 00
2 boxes, tool, hand,	1 00
2 braces, sewer, wood,	1 50
5 brake castings, cart,	2 50
5 brake hangers, iron,	5 00
1 brick, lot,	4 00
56 brooms, barn, old,	14 00
62 brooms, push, fibre,	24 80
3 brushes, horse,	7 50
4 brushes, mane,	1 00
2 brushes, paint,	50
2 brushes, steel,	1 00
1 buggy, concord,	70 00
5 bung pullers,	1 00
8 cans, kerosene, 5 gallon,	4 00
3 cans, kerosene, 2 gallon,	1 05
4 cans, kerosene, 1 gallon,	1 00
6 cans, oil, 10 gallon,	6 00
11 cans, oil, 5 gallon,	11 00
3 cans, oil, 2 gallon,	1 50
1 can, oil, 1 gallon,	25
6 cans, oil, hand,	1 50
13 canvas pieces,	13 00
2 caps, exploding, boxes, "Lyons,"	1 00
4 cards, horse,	40
9 carts, 2 horse dump,	675 00
5 carts, 1 horse dump,	150 00
1 cart, without front wheels,	50 00
12 carts, watering,	2,400 00
6 carts, watering,	300 00
13 carts, iron, "Black,"	39 00

1 cart, wood, "Hokey pokey,"	\$1 00
3 carts, "Harold Bond,"	9 00
1 cart, grain,	1 00
2 cart boxes,	50
12 cart cans, "Harold Bond,"	12 00
1 cart jack on wheels,	2 00
1 cart jack,	1 00
2 cart, water, caps,	1 00
10 cart wheels, for flushing,	10 00
900 cement, bags of,	450 00
13 chains, cart,	19 50
1 chain, derrick, grab,	2 00
5 chains, guy,	5 00
2 chains, heel,	1 00
3 chains, spreader,	4 50
2 chains, stake,	50
2 chain pieces,	20
1 chisel, brick, $\frac{1}{2}$ inch,	25
5 chisels, carpenter,	1 25
4 chisels, cold, with handles,	1 00
2 chisels, cold,	20
1 chisel, ice,	1 00
11 chisels, stone,	1 65
1 clippers, horse, pair,	2 00
1 clock,	25
1 coal, poker,	10
1 coal, ton, soft,	4 00
4 coats, oilcloth,	3 00
5 collars, leather, extra,	5 00
1 collar, steel,	9 00
3 collars, straw,	3 00
1 cotton line, 150 feet,	75
3 creasers, roller, sidewalk,	15 00
15 creasers, sidewalk,	15 00
4 cupboards,	8 00
6 curry combs,	1 50
1 derrick, three leg,	25 00
1 derrick, 48 feet, steam,	150 00
1 derrick, 36 feet,	35 00
1 derrick, 29 feet,	35 00

1 desk,	\$1 00
2 dippers, tar,	1 00
3 dippers, water,	15
2 disks, 15 inches,	4 00
1 door hangers, set,	2 00
4 drags,	16 00
2 drags, wheel,	40 00
2 drills, breast,	1 50
50 drills, hand,	5 00
29 drills, jumper,	14 50
13 drills, steam,	13 00
1 drill, steam, "Rand,"	75 00
2 eveners, extra,	2 00
2 eveners, wood,	50
½ emery, 1b.	20
1 engine, hoisting, "Monday,"	100 00
1 falls, chain "Yale and Town" set,	4 00
5 faucets, brass,	3 75
7 faucets, iron,	3 50
2 files, iron,	20
3 files, wood,	45
1 forge, portable,	5 00
8 forks, hay,	2 00
150 fuse, feet,	15 00
5 gaskets, 4½ x 3½ inches,	1 25
5 gaskets, 5½ x 3½ inches,	1 25
1 gauge, carpenter,	25
½ graphite, 1b.,	13
1 grate, 42 x 22,	3 00
1 grinder, "Bull dog,"	5 00
13 grubs,	6 50
21 halters,	10 50
1 hammer, blacksmith's,	25
1 hammer, brass,	1 00
1 hammer, bull, set,	1 00
6 hammers, claw,	1 50
7 hammers, drilling,	3 50
7 hammers, face, 6 inch,	7 00
2 hammers, machine,	1 00
5 hammers, paving,	5 00

1 hammer, peaning,	\$31 00
1 hammer, snow,	25
1 hammer, spiking,	1 00
1 hammer, striking, 8 lbs.,	3 00
6 hammers, striking, 6 lbs.,	12 00
1 handle, augar,	20
6 handles, C. B. spoon,	1 50
4 handles, hammer, drilling,	40
3 handles, hammer, sledge,	30
98 handles, pick,	9 80
3 handles, wood, snow plow,	1 50
3 harnesses, express,	45 00
10 harnesses, 2 horse, set,	250 00
1 harness, 1 horse, "Coolidge,"	15 00
2 harnesses, tip cart,	30 00
1 harness pan,	1 00
1 harrow, steam roller,	5 00
1 harrow,	2 00
12 hats, rubber,	6 00
1 hay cutter,	10 00
2 heaters, sand, "Dillon,"	20 00
42 hoes, iron, L. H.,	10 50
8 hooks, bridge,	8 00
2 hooks, brush,	1 00
1 hook, cant,	1 00
3 hooks, hay,	75
1 hook, hay, grab,	25
2 hooks, rubbish,	1 00
4 hooks, stall,	1 00
10 hooks, stone, grab,	10 00
4 hooks, tub,	1 00
13 horses (good),	3,250 00
6 horses (fair),	600 00
12 horses, wood, shop,	12 00
3 horses, wood, street,	6 00
29 hose couplings,	14 50
500 hose, cotton fire, ft., 3 inch,	250 00
75 hose, garden rubber, ft., $\frac{1}{2}$ inch,	7 50
9 hose, steam, ft., $2\frac{1}{2}$ inch,	5 00
206 hose, steam, ft., $1\frac{1}{2}$ inch,	20 60

13 hose, steam, ft., 1½ inch,	\$5 00
10 hose, steam, ft., 1¼ inch,	4 00
19 hose, steam, ft., 1 inch,	5 70
30 hose, steam, ft., ¾ inch,	3 00
25 hose, steam, ft., ¾ inch,	2 50
1 ice cutter, 2 horse, "Wood,"	70 00
45 ice cutter teeth,	4 50
1 inspirator, "Ohio,"	3 00
2 jack screws,	6 00
1 kettle, iron,	25
3 knives, putty,	30
1 ladder, 36 ft., extension,	5 00
1 ladder, 24 ft.,	2 40
1 ladder, 23 ft.,	2 30
1 ladder, 14 ft.,	1 40
1 ladder, 6 ft., step,	1 50
1 ladle,	75
6 lamp black, pkgs.,	60
68 lanterns,	34 00
12 lantern burners,	60
29 lantern cages,	7 25
31 lantern hooks,	7 75
25 lead, white, lbs.,	1 75
10 levels, spirit,	10 00
4 levels, spirit, frames,	1 00
1 leveler, 2 horse, snow, "Hogan,"	50 00
45 logs, blasting,	22 50
1 looking glass,	10
2 mallets, carpenter's,	50
2 mallets, wood, large,	2 00
2 mauls, paving, iron,	3 00
5 mauls, paving, wood,	5 00
1 measure, 4 qt.,	10
1 measure, 2 qt.,	10
1 measure, 1 qt.,	10
1 mop wringer,	25
7 mortar beds,	28 00
1 motor, water,	25 00
1 moulding board, extra,	5 00
1 muzzle, leather,	1 00

2 muzzles, wire,	\$1 00
3 nails, 10d., lbs.,	09
1 nail, set,	10
10 neck yokes, ironed,	10 00
5 nets, leather, fly,	10 00
1 nozzle, flush,	1 00
1 nozzle, hose,	1 00
35 oil, cylinder, gals.,	21 00
5 oil, harness, cans,	5 00
2 oil, neatsfoot, gals.,	1 20
6 oil, raw, gals.,	3 60
½ packing, sheet, lbs.,	50
1½ packing, steam, lbs.,	1 50
5 pails, fibre,	1 25
6 pails, G. I.,	1 50
12 pails, J. I. C.,	3 00
3½ paint, "National," bbls.,	12 25
3½ paint, "Uncle Sam," bbls.,	12 25
1 paint, chrome yellow, lb.,	12
1 paint, Prussian blue, lb.,	12
74 picks,	37 00
8 pipe, 6 inch, ft.,	40
12 pipe, 12 inch, ft.,	3 00
3 planes, iron,	3 00
1 plane, wood,	50
3 planks, drag,	3 00
2 pliers, prs.,	50
1 plow, breaking,	4 00
1 plow, gutter, snow,	2 00
2 plows, hardpan,	10 00
1 plow point, rooter,	50
1 pole, gin,	1 00
2 poles, pike,	1 50
239 posts, chestnut, 8 ft.,	38 24
500 posts, chestnut, 6 ft.,	60 00
8 posts, painted, street sign,	12 00
38 posts, street sign,	38 00
50 powder, blasting, lbs.,	5 00
1 pulley block, iron 1¼ inches,	1 00
14 pulley blocks, wood, sets,	14 00

1 pulley block, 3 inch iron,	\$1 00
1 pulley block, 5 inch iron,	5 00
1 pump, copper,	5 00
1 pump, diaphrágm,	20 00
1 pump for steam drill,	1 50
1 punch, special,	50
2 punches, trap,	50
12 punches, steel,	1 20
9 rakes, iron,	2 25
4 rakes, hay,	1 00
2 reducers,	4 00
1 reins, four-horse, set,	2 00
3 rivets, lbs., $\frac{1}{4}$ - $2\frac{1}{2}$,	18
1 road machine, "Climax,"	100 00
1 roller, iron, hand,	3 00
1 roller, steam, "Buffalo Pitts,"	1,000 00
1 roller, stone, hand,	5 00
1 roller, stone, 2 horse,	15 00
2 rollers in frame, wood,	6 00
1450 rope cable, $\frac{3}{4}$ inch, feet,	145 00
500 rope, cable, $\frac{5}{8}$ inch, feet,	50 00
500 rope, cable, $\frac{1}{2}$ inch, feet,	50 00
108 rope, manilla, $1\frac{1}{2}$ inches, feet,	10 80
237 rope, manilla, $1\frac{1}{4}$ inches, feet,	23 70
241 rope, manilla, 1 inch, feet,	24 10
714 rope, manilla, $\frac{3}{4}$ inch, feet,	71 40
1 rope, tag,	25
1 runners, for road machine, set,	20 00
1 sacking, lot,	1 00
25 salt bags, C. F.,	18 75
2 sand, lots,	135 00
2 sand screens,	5 00
2 sand screen wires,	2 00
2 saws, buck,	1 00
1 saw, clamp, "Disston,"	50
2 saws, cross cut,	2 00
5 saws, hand,	2 50
1 saw, mitre,	50
1 saw, rip,	25
1 saw, set,	25

3 saw blades,	\$ 75
1 saw blade, key hole,	1 00
1 saw blade, hack,	1 00
1 scarifier, "Longenecker,"	500 00
1 scissors, pair,	25
1 scoop, 2 horse,	5 00
2 scrapers, brass, horse,	1 00
2 scrapers, bridge,	20
14 scrapers, iron, sidewalk,	3 50
6 scrapers, sidewalk, "Black,"	210 00
1 scraper, sidewalk, wood, "Battles,"	2 00
6 screw drivers,	60
½ screws, 2 inch-1 inch, gross,	25
5 screws, lbs.,	2 50
½ screws, gross, 1½ x ¼ inch,	1 00
2 scythes,	1 00
2 shaves, draw,	50
1 sled bunk,	1 00
8 sleds, two-horse,	400 00
3 sleds, one-horse,	135 00
3 sleds, extra,	6 00
2 snaths,	20
1 stove, coal,	12 00
1 stove, wood,	12 00
1 stove, coal hod,	25
1 stove, poker,	10
1 shovel, coal,	10
11 shovels, L. H. R. P.,	2 75
64 shovels, S. H. R. P.,	16 00
81 shovels, S. H. S. P.,	20 25
16 shovels, scoop, snow,	8 00
88 shovels, snow,	44 00
2 skids,	4 00
2 spades, L. H.,	1 00
1 spanner,	25
5 spikes, 6 inches, lbs.,	15
5 spikes, 5 inches, lbs.,	15
½ spikes, 6 inches, keg,	1 50
¾ sponges, lb.,	75
8 spoons, drilling,	8 00

3 spreaders,	\$4 50
4 springs for water cart,	2 00
5 squares, steel,	1 25
2 squares, try,	1 00
4 staples, iron, cart,	2 00
1 stencil, "City," brass,	10
3 stencils, "City," iron,	1 50
4 stencils, "City," steel,	2 00
1 stencil, "Fitchburg," steel,	50
2 stencils, brass, set,	20
1 stencil, steel, set,	50
27 steel pcs., 1¼ inch,	13 50
12 steel pcs., 1½ inch,	6 00
5 steel pcs., 1½ inch sq.,	2 50
1 stone, grind,	3 00
1 stone, oil,	50
4 stone, sets,	4 00
30 stone points,	3 00
2 stone steps,	2 00
80 street signs, iron,	8 00
117 street signs, wood, lettered,	58 50
9 street signs, wood,	4 50
43 street signs, iron brackets,	10 75
1 street sweeper, "Abbott, Downing Co.,"	20 00
1 street sweeper, "J. S. Barton,"	20 00
3 street sweeper brushes,	36 00
3 street sweeper cores,	3 00
1 syringe, rubber,	50
5 tampers, iron, sewer,	2 50
10 tampers, iron, sidewalk,	5 00
1 tape, steel, 25 ft.,	2 00
2½ tarvia "A" bbls.,	9 00
51 tarvia "X" bbls.,	229 50
2 tar heaters on wheels,	100 00
10 tar pots,	2 50
2 tongs, blacksmith, prs.,	2 00
2 tongs, pipers, prs.,	1 50
1 tool box, "Gaudreau,"	2 00
1 tool box, "Whitman,"	50 00

5 tracers,	\$1 25
1 trough, stone,	5 00
1 trough, wood, mixing,	2 50
16 trowels, brick,	4 00
7 trowels, plaster, iron,	3 50
1 truck, iron, "Borowsky,"	1 00
3 tunnels, tin,	30
½ turpentine, gal.,	38
1 union, dart, 1½ inch,	85
½ varnish, gal.,	50
6 valves, needle,	7 50
1 valve, 2 inch globe,	1 25
2 valves, 2½ inch check,	2 50
1 vise,	2 00
1 wagon, "Bennett,"	100 00
1 wagon; "Connolly," flushing,	900 00
1 wagon, hay,	50 00
1 wagon, "Hogan,"	25 00
1 wagon, heavy express,	25 00
1 wagon, light express,	15 00
1 wagon, pipe,	50 00
1 wagon, tarvia,	25 00
6 washers for water carts.	75
½ washers, ¼ x 2½ inches, 1b.,	05
1 wash basin,	10
1 watering pot,	25
15 wedges and shims, lbs.,	1 80
2 wedges, 2 feet, 3 inches,	2 00
13 wedges, 6 inches,	6 50
3 wheels, old,	75
6 wheelbarrows, iron,	6 00
1 wheelbarrow, wood,	1 00
8 whips, stright,	80
1 whip lash, 4 horse,	50
3 wrenches, alligator,	1 50
3 wrenches, bridge,	6 00
3 wrenches, buggy,	75
4 wrenches, cart,	2 00
5 wrenches, fork,	1 25
4 wrenches, hydrant,	4 00

1 wrench, hose,	\$ 25
8 wrenches, monkey,	4 00
1 wrench, pipe, chain,	4 00
1 wrench, pipe,	50
1 wrench, socket,	50
3 wrenches, socket,	75
6 wrenches, " Stillson,"	6 00
10 wrenches, water cart,	10 00
3 wrenches, water gate,	1 50
2 wire, fence, bundles,	4 00
2 wire, hog, bundles,	4 00
1 wire puller,	1 00
5 whiffletrees, extra,	7 50
10 whiffletrees, irons for,	5 00
5 whiffletrees, wood for,	1 25
11 yokes, ironed, large,	2 75
10 yokes, ironed, small,	2 50
6 yokes, wood,	1 50
1 bed, iron,	3 50
1 bed blanket,	1 00
1 bed mattress,	1 00
1 bed quilt,	50
2 bed sheets,	2 00
1 bed spring,	1 00
2 pillows,	1 00
2 pillow cases,	50

	\$16,004 61

OFFICE.

1 adding machine, " Burroughs,"	\$250 00
300 badges,	150 00
2 cabinets, 10 sections,	85 50
7 chairs, arm,	21 00
1 chair, swivel,	3 00
700 checks,	70 00
200 checks, in case,	10 00
1 copy press,	12 00
1 copy press stand,	6 00
1 counter, " Eaton,"	87 00

1 desk, flat top,	\$25 00
1 desk, roll top,	25 00
1 dater, "Triumph, No. 1,"	1 50
1 dater, "Crown,"	50
24 files, spindle,	2 40
3 ink stands,	30
1 index, steel,	7 00
1 numbering machine, "Ajax,"	8 00
1 safe, "Meillink,"	40 00
2 sponge cups,	30
1 stencils, rubber, set,	5 00
1 waste basket,	25

	\$809 75

WEST FITCHBURG STABLES.

2 axes,	\$1 00
1 bar C. B.,	50
9 bars, iron,	4 50
2 bars, piuch,	50
1 bells, set,	25
1 belt punch,	25
3 blankets, horse, storm,	9 00
1 boots, rubber, L. L., pr.,	4 00
1 box, for dynamite,	1 00
4 boxes, tool,	20 00
9 brooms, barn, corn,	2 25
1 bucket,	25
2 canvas pcs.,	2 00
2 caps, explosive, "Lion," boxes,	50
1 cart, 1 horse,	35 00
1 cart, 2 horse,	50 00
7 chains, draft,	10 50
1 chain, grab,	2 00
4 chains, heel, set,	1 00
2 chains, stake,	50
1 chain, yoke, set,	50
1 chisel, carpenters,	25
1 clippers, horse, pr.,	2 00
1 coal stove,	5 00

1 coal poker,	\$ 10
1 coal hod,	10
1 coat, rubber,	1 50
1 derrick, 3 leg,	15 00
3 dippers, water,	15
1 disinfectant, gal.,	50
2 drags,	4 00
30 drills, hand,	3 00
18 drills, jumper,	4 50
20 dynamite, sticks,	4 00
1 evener, extra,	1 50
1 faucet, iron,	10
3 feed bags,	1 50
1 file, wood,	25
3 forks, hay,	1 50
1 fork, manure,	40
200 fuse, ft., "Star,"	20 00
2 grease, "Snowflake," cans,	50
2 grooming tools,	2 00
6 grubs,	3 00
3 halters,	1 50
3 hammers, claw,	75
3 hammers, drilling,	1 50
2 hammers, face,	3 00
1 hammer, machine,	50
2 hammers, paving,	1 00
1 hammer, peaning,	50
6 hammers, striking,	6 00
3 handles, hammer, drilling,	30
2 handles, hammer, striking,	20
19 handles, pick,	2 90
1 harness, express, 1 horse,	5 00
1 harness, two horse, set,	25 00
1 harness, tip cart,	10 00
4 harness snaps,	40
13 hoes, L. H.,	3 25
2 hooks, brush, L. H.,	50
3 hooks, brush, S. H.,	75
3 hooks, hay,	75
2 hooks, stone, grab,	2 00

4 hooks, harness,	\$ 40
1 hook, stall,	25
1 hokey pokey,	2 00
2 horses, wood,	50
3 horses,	450 00
50 hose, rubber, feet, $\frac{3}{4}$ inch,	5 00
100 hose, rubber, fire,	50 00
1 jack, cart,	1 50
1 jug,	10
1 kettle, iron,	50
1 ladder, 14 feet,	1 40
22 lanterns,	11 00
18 lantern hooks,	4 50
2 levels, spirit,	2 00
1 level, frame,	25
1 mallett, wood,	50
1 maul, wood, paving,	1 00
1 measure, 4 qt.,	10
1 measure, 2 qt.,	10
1 measure, 1 qt.,	10
2 mortar beds,	3 00
1 mop,	10
1 muzzle, leather,	1 00
1 nozzle, iron,	1 00
1 oil, harness, gal.,	20
2 oil cans, 5 gal.,	1 00
1 oil can, 1 gal.,	20
2 pails, G. I.,	50
4 pails, J. I. C.,	2 00
1 pail, fibre,	25
36 picks,	18 00
1 plow, gutter,	4 00
6 points, stone,	60
20 powder, lbs.,	3 00
7 rakes, iron,	1 75
1 reins, set, 4 horse,	4 00
1 road machine, "Climax,"	75 00
1 riveter,	10
3 ropes, tag,	75
1 salt, bag,	75

1 saw, buck,	\$ 50
3 saws, hand,	1 50
1 sand, lot,	25 00
1 scissors, pr.,	25
4 scrapers, sidewalk, iron,	1 00
1 scraper, sidewalk, "Black,"	30 00
2 scythes and snaths, brush,	1 00
1 set stone,	50
1 shave, draw,	50
8 shims and wedges, lbs.,	96
23 shovels, S. H. R. P.,	5 75
29 shovels, S. H. S. P.,	7 25
6 shovels, L. H. R. P.,	1 50
8 shovels, snow,	4 00
3 shovels, scoop,	1 50
1 sieve, coal,	25
1 sled, two horse,	40 00
1 sled, one horse,	20 00
1 soap, box,	50
1 soap, bar,	10
1 snap,	10
4 straps, hame,	40
1 spade, L. H.,	50
3 spoons, drilling,	45
1 springs, set,	1 50
5 sponges,	1 25
1 square, steel,	50
1 stencil, "City," steel,	50
1 stencil, "City," brass,	1 00
1 stone, grind,	2 00
1 stone, whet,	25
3 surcingles,	75
1 tamp, sewer,	25
1 tape, linen, 75 feet,	50
2 trowels,	50
1 toggles, set,	10
9 wedges, iron,	4 50
3 wheelbarrows, wood,	3 00
1 whiffletree, extra,	1 00
1 whip, four horse,	50

1 whip, straight,	\$ 25
1 wrench, cart,	1 00
1 wrench, hydrant,	1 00
3 wrenches, monkey,	1 50
1 vise,	4 00
1 bag, feed,	1 50
2 corn, bu.,	1 70
1 hay, ton,	26 00
5 oats, bu.,	3 00
300 straw, lbs.,	3 00
	—————
	\$1,111 26

REAL ESTATE.

19,800 sq. ft. of land, Westminster street,	\$1,500 00
Stable and shed, Westminster street,	1,150 00
29,981 ft. of land, Harwood place,	6,000 00
Stable and sheds, Harwood place,	6,500 00
	—————
	\$15,150 00

PERSONAL ESTATE.

City stable, Harwood place,	\$16,004 61
City stable, Westminster street,	1,111 26
Office,	809 75
	—————
	\$17,925 62

SUMMARY.

Real estate,	\$15,150 00
Personal estate,	17,925 62
	—————
	\$33,075 62

TABLE I

Showing appropriations, loans, transfers, receipts and expenditures from 1901 to and including 1911.

	MACADAM CONSTRUCTION			MACADAM MAINTENANCE			
	Loan	Receipts	Expenditures	Appropriations	Transfer Liquor Licenses	Receipts	Expenditures
1901.....			\$163 14				\$383 91
1902.....			2,233 89			\$320 82	2,237 69
1903.....			1,992 01			9 68	3,347 35
1904.....	\$42 24		2,203 37				1,610 82
1905.....	1,260 55		7,024 11	\$4,000		346 57	4,916 74
1906.....			7,591 98	4,000			6,499 86
1907.....		15 00	10,269 50	4,000		8 23	4,902 14
1908.....		11 00	5,211 98	4,000		72 82	5,247 90
1909.....			4,465 93	4,000	\$2,000 00	566 52	8,561 43
1910.....		12,022 64	5,075 70	4,000		2,000 00	6,098 78
1911.....	\$4,834 56	92 64				1,979 83	15,171 90
	\$4,834 56	\$3,444 07	\$46,231 61	\$24,000	\$4,000 00	\$3,304 47	\$58,978 52

TABLE II.

Showing appropriations, loans, transfers, receipts and expenditures from 1901 to and including 1911.

	PAVING CONSTRUCTION			PAVING MAINTENANCE			
	Loans	Receipts	Expenditures	Appropriations	Transfer Liquor Licenses	Receipts	Expenditures
1901.....	\$11,000 00	\$13,353 76	\$24,344 01				\$4,781 61
1902.....	6,500 00	11 77	6,642 07				4,702 26
1903.....	10,000 00	686 33	8,433 98			\$290 00	5,387 55
1904.....	6,500 00	10 52	8,497 15			78 85	6,546 95
1905.....	4,000 00		3,961 88			2 88	6,646 67
1906.....	9,750 00	138 29	9,379 99	\$5,500		148 62	8,372 10
1907.....	3,500 00		3,940 71	5,500		134 28	6,559 22
1908.....	17,500 00	25 05	21,822 90	5,500		117 78	7,248 64
1909.....	25,036 83	541 62	23,079 18	6,000		113 46	7,471 51
1910.....	7,300 00	1,633 83	7,620 38	6,000	\$1,500 00	4,173 90	15,010 41
1911.....	14,802 84	417 58	16,761 33	6,000	1,500 00	293 85	9,633 92
	\$115,889 67	\$16,818 75	\$134,483 58	\$34,500	\$3,000 00	\$3,353 62	\$82,360 84

TABLE III

Showing appropriations, loans, assessments, receipts and expenditures from 1898 to May 1st, 1911.

	SEWER CONSTRUCTION				SEWER MAINTENANCE		
	Assessments	Loans	Receipts	Expenditures	Appropriations	Receipts	Expenditures
1898....	\$5,820 32	\$10,000 00	.....	\$11,970 13	\$1,000	\$933 16	\$3,304 52
1899....	5,950 23	10,000 00	\$599 38	9,906 90	1,000	88 63	3,104 84
1900....	1,383 51	5,000 00	547 75	4,209 20	1,500	181 60	6,078 70
1901....	2,618 07	3,000 00	1,908 73	7,419 76	1,500	166 93	5,083 28
1902....	3,738 63	10,000 00	825 43	14,476 90	3,000	135 61	5,653 12
1903....	11,535 47	6,000 00	1,911 60	20,423 91	3,250	172 62	3,472 75
1904....	306 83	7,500 00	429 37	7,486 69	3,000	320 28	5,517 10
1905....	7,248 55	7,200 00	887 58	16,011 97	3,000	256 25	4,685 79
1906....	12,012 69	3,250 00	1,910 24	6,089 74	3,000	326 97	5,007 67
1907....	11,205 07	12,500 00	686 89	24,693 54	3,000	104 15	4,791 29
1908....	409 75	2,000 00	759 04	3,952 75	3,000	209 16	6,068 23
1909....	9,022 99	9,242 76	875 16	19,947 92	3,500	73 46	3,837 93
1910....	5,307 73	6,229 49	769 43	12,644 68	4,000	667 10	4,714 42
1911....	106 84	.....	60 78	263 86	3,500	80 02	1,176 94
	\$76,666 68	\$91,922 25	\$12,171 38	\$159,497 95	\$37,250	\$3,715 94	\$62,496 58

TABLE IV

Showing loans, assessments, transfers, receipts and expenditures from 1898 to and including 1911.

	SIDEWALK CONSTRUCTION				SIDEWALK MAINTENANCE			
	Loans	Assessments	Receipts	Expenditures	Appropriations	Transfer Liquor Licenses	Receipts	Expenditures
1898	\$2,000 00	\$2,734 13	.....	\$5,931 78	\$1,500	.....	\$82 39	\$2,026 16
1899	7,000 00	3,221 59	\$433 52	8,748 43	1,500	.....	21 45	2,443 15
1900	5,000 00	640 84	1,627 15	6,921 32	1,500	.....	250 07	2,880 36
1901	3,000 00	2,192 34	.....	5,148 98	1,500	.....	317 82	2,542 84
1902	6,000 00	3,396 99	1,855 86	10,861 17	2,000	.....	169 06	4,105 76
1903	5,000 00	1,787 68	717 65	6,508 34	2,250	.....	680 74	5,773 12
1904	5,000 00	420 17	127 56	6,592 84	2,250	.....	6 27	3,419 54
1905	5,000 00	3,498 59	.....	4,905 10	4,750	.....	16 45	5,712 07
1906	8,750 00	3,418 38	364 63	11,090 82	2,300	.....	62 07	3,871 83
1907	4,000 00	1,560 63	321 38	6,092 07	2,300	.....	30 54	6,921 32
1908	5,000 00	2,447 25	510 57	9,045 25	5,500	.....	45 84	7,550 02
1909	5,248 11	3,307 68	598 46	9,306 29	3,500	.....	14 44	7,052 61
1910	4,250 00	2,051 13	46 72	7,358 88	3,500	\$1,000 00	98 19	4,750 20
1911	13,145 40	5,133 38	424 51	18,356 54	3,500	.....	214 71	3,874 14
	\$78,393 51	\$35,810 78	\$7,028 01	\$116,867 81	\$37,850	\$1,000 00	\$2,010 04	\$62,923 12

TABLE V

Showing appropriations, betterments, loans, receipts and expenditures from 1897 to and including 1911.

	STREET CONSTRUCTION					STREET MAINTENANCE		
	Approp-riations	Better-ments	Loans	Receipts	Expendi-tures	Approp-riations	Receipts	Expendi-tures
1897..	\$1,000		\$5,000 00	.....	\$5,003 68	\$30,000	\$1,369 21	\$38,734 18
1898..			16,000 00	.....	8,283 38	30,000	1,889 28	35,494 69
1899..	1,000		14,000 00	.....	15,454 72	35,000	7,487 50	39,186 60
1900..	1,000		5,000 00	\$115 00	3,644 85	33,000	11,929 78	43,900 87
1901..	1,000		35,000 00	354 17	35,970 50	34,000	9,624 24	38,723 07
1902..			35,000 00	54 77	34,386 56	32,000	10,580 58	38,353 04
1903..			55,000 00	1,310 75	56,078 58	33,000	11,669 78	43,773 84
1904..			25,000 00	3,014 10	17,951 04	30,000	10,615 01	35,664 71
1905..			53,000 00	144 11	58,278 60	34,250	9,662 01	34,803 31
1906..			40,000 00	132 59	33,207 81	25,500	9,634 28	37,774 08
1907..			35,000 00	18 69	28,017 14	25,500	3,826 53	38,483 17
1908..	\$199 23		38,000 00	23 15	27,034 12	26,000	9,099 75	45,043 49
1909..	660 83		15,831 40	.....	13,602 61	30,000	8,753 24	49,424 71
1910..	2304 96		12,650 00	2,190 04	16,667 17	30,000	10,289 58	40,028 31
1911..	915 81		15,155 60	3 44	15,860 67	32,000	9,552 88	43,497 95
	\$4,000	\$4080 83	\$399,637 00	\$7,360 81	\$369,441 43	\$460,250	\$125,383 65	\$602,886 02

TABLE VI

Showing appropriations, assessments, receipts and expenditures from 1899 to and including 1911.

	STREET WATERING AND OILING			
	Appropriations	Assessments	Receipts	Expenditures
1899..	\$1,500 00	\$2,991 38	\$25 00	\$4,254 29
1900..	1,500 00	3,181 48	2 10	4,691 09
1901..	1,500 00	3,239 91	.....	4,241 63
1902..	1,500 00	3,225 02	25 00	4,857 29
1903..	1,500 00	3,195 50	.....	4,200 42
1904..	1,000 00	3,298 15	.....	5,028 26
1905..	1,000 00	3,345 01	.....	6,091 06
1906..	1,000 00	4,533 40	.....	6,354 46
1907..	1,000 00	4,568 97	.....	5,691 14
1908..	1,000 00	4,646 34	.....	7,229 52
1909 oiling ..	1,500 00	5,093 60	11 72	8,737 03
1910..	1,500 00	5,218 87	30 90	8,090 91
1911..	1,500 00	7,958 77	61 51	9,191 26
	\$17,000 00	\$54,496 40	\$156 23	\$78,658 36

Respectfully submitted,

MICHAEL J. HOGAN,
Superintendent.

ANNUAL REPORT
OF THE
PARK COMMISSIONERS
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911

DEPARTMENT OF PUBLIC PARKS.

COMMISSIONERS' REPORT FOR 1911.

To His Honor, the Mayor, and the City Council of the City of Fitchburg :

In accordance with the Revised Laws of the Commonwealth of Massachusetts, 1902, Chapter 28, Section 13, the title "Public Parks, Playgrounds, and the Public Domain," the Park Commissioners of the City of Fitchburg respectfully submit their annual report.

BOARD OF PARK COMMISSIONERS.

For 1911.

HENRY F. COGGSHALL,	1909-1914
JOHN H. DANIELS,	1908-1913
JOHN SHIRREFFS,	1907-1912
D. SIDNEY WOODWORTH,	1901-1915
HARRY G. TOWNEND,	1911-1916

OFFICERS.

CHAIRMAN,

Henry F. Coggshall.

SECRETARY,

D. Sidney Woodworth.

REPORT OF PARK COMMISSIONERS

FITCHBURG, MASS., Dec. 1, 1911.

To His Honor, the Mayor, and the City Council :

We herewith submit the report of the Park Commission for the year ending Dec. 1, 1911. The Board of Park Commissioners, consisting of Henry F. Coggshall, John H. Daniels, John Shirreffs, D. Sidney Woodworth, and Harry G. Townend, organized with Henry F. Coggshall for President and D. Sidney Woodworth for Secretary. The Board held 17 regular and special meetings, several hearings, and general supervision of the work during the year.

The rapidly increasing duties of the Board, owing to the natural extension of the work, the fitting up and conducting of new playgrounds, and the effort to care for and preserve the trees upon our streets, avenues and parks, have demanded a much larger amount of time than ever before. The latter part of the year the City Council assigned the Park Commission and City Forester—appointed to that position under direction of the Park Commission—a room in City Hall for department headquarters. This was very much needed and the Commission wish to express their appreciation for the courtesy shown. The work of the department is now varied and has assumed proportions that make it an important factor in our City Government and much of the work needs constant tabulating and recording. Miss Ellen M. Newcombe has been installed as clerk and stenographer. Under the direction of Mr. Colton, City Forester, she is rapidly getting the office into a systematic and well arranged condition. All the work connected with the department and the data connected with parks, playgrounds, trees, the City Forester, and the moth work, is filed and collaborated and put into shape for use and ready reference.

CITY PARKS.

The department has had to labor under serious disadvantages the past year owing to the extreme drought and consequent lack of water. Shrubs and plants have not grown nor developed as they would have done, nor have we been able to make as good an exhibition in our small city parks as we should have had the weather conditions been more favorable. The city now has one large park, six small ones, and three small open places or "City Greens" as they are usually designated.

COGGSHALL PARK.

In Coggshall Park, with its 208 acres of wooded land, this city has a splendid park of great natural beauty and attractiveness that by a little planning and developing will make one of the most beautiful parks in the country. It contains several splendid pine, chestnut and maple groves, hills and glens with brooks running through them, that easily adapt it to park purposes, and the needs and spirit of those who love the hills and woods and are looking for rest and recreation. That it meets a great want is evidenced by the thousands that have visited it during the past year.

Two new roads have been built, one from the recreation park to the ball field, and the other a hill side road that was built primarily as a fire barrier to protect the large pine grove, and secondarily to open up a new part of the park, the old roads and paths cleared and the groves cared for. In May, fire swept Lookout Mountain, killing all the plants and trees upon the mountain, and only the strenuous work of the city firemen prevented the utter destruction of the pine woods. Since the road was built a fire started upon each side of it, but the road prevented its reaching the wood, showing that the building of the road had been a good thing.

The wood on the land that had been burned over in the park has been disposed of in small lots to various parties, who have taken the contract to clear the pieces and remove the brush from the plots that they have contracted for. The Commission has saved quite a little expense in clearing off this burnt district by disposing of the burnt timber standing. We



MT. ELAM ENTRANCE TO COGGSHALL PARK



PAVILION AND DANCE HALL, COGGSHALL PARK



DANIELS PARK, CLEGHORN SQUARE

hope by spring to have the burnt-over section entirely cleared off.

A dam has been built at the lower part of the meadow at the foot of Laurel and Hillside roads and the meadow flooded forming a beautiful little lake of six acres christened by Mr. Coggshall "Mirror Lake." At one time during the dryest part of the dry season a fire started at the edge of the woods and in order to get water a barrel was sunk into the meadow. The watered flowed in faster than it could be dipped out, showing that there were undoubtedly several springs in the meadow. Mr. Coggshall called in an engineer, Mr. Fred C. Davis, to look the ground over and test the bottom. He declared it perfectly feasible to flow the meadow and erect a dam so the Commission voted to do so, and carry out a cherished idea of Mr. Coggshall. The lake has added much to the beauty of the park and in the winter will be a perfectly safe place for children and others for skating purposes. Coggshall Park is very generously patronized by both old and young, and we ought to have the money to more fully develop it. It certainly will pay our citizens a dollar for every dollar expended in opening it up and beautifying it.

FALULAH PARK.

This little park, a natural piece of woodland containing a fine grove and Falulah Brook running through it, situated upon the Rindge road was presented to the city several years ago for a city park. It is very prettily situated and would make a very nice addition to our park system if opened up. Owing to our limited appropriation and lack of funds we have been unable to do anything towards developing it. This is really not creditable to our city as we ought to show our appreciation of the gift by doing something to improve it and open up its beauties to the public. We hope to be in a condition to do that this year.

MONUMENT PARK.

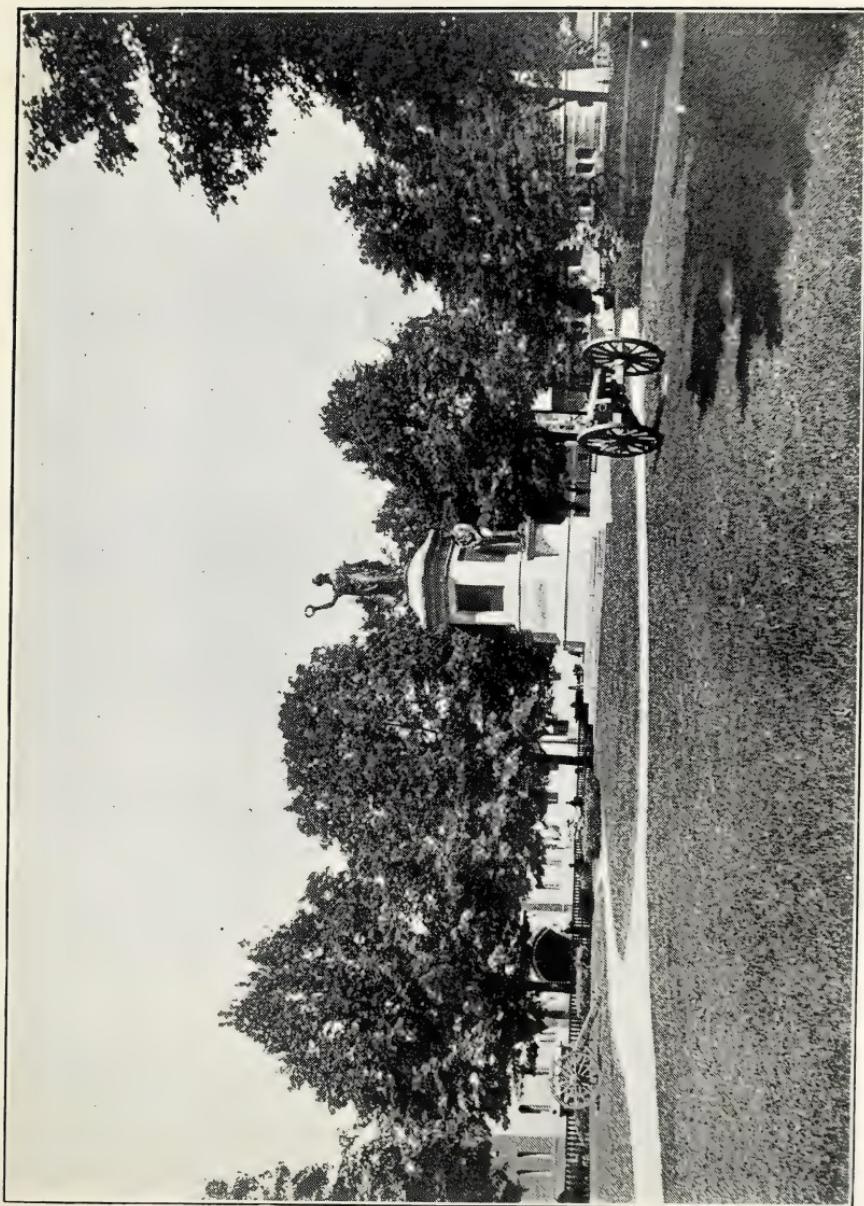
An effort to make laurel grow in city parks proved a failure in Monument Park. A great amount had been transplanted. A great bulk of it died and presented a ragged and ungainly appearance, so much so that we felt that it was best to remove

it. This might have been partly due to the extreme dryness of the season, but from results obtained we are of the opinion that mountain laurel cannot be made to grow successfully in a city park. The laurel was taken out and the ground filled with flowering shrubs and plants. Just at the time that these were beginning to develop and bloom they were cut off from the water supply, and the result was the death of the shrubs. The dryness was the cause of the poor showing of the barberry hedges that were placed around Railroad Park, at the ends of the crosswalks of the Upper Common and that at Daniels Park. These we shall try to replace in the spring, and the small parks will be put in about the same condition as last year.

Heretofore the work of the department has been let out by contract to Mr. C. W. Moeckel, who has had the contract and performed his work in a very satisfactory manner, but owing to the consolidation of the City Forester's work with the Park Department and the working in harmony with the department of the City Forester and the Moth Superintendent it was deemed best to have the work of the department done by the department itself, under the direction of Mr. William W. Colton, who at a meeting in September was elected Superintendent of Parks. It was felt that the best interests of the city and greater efficiency could be obtained by having the work under one head. There will be times where the superintendent could use the men in park work and at other times could transfer them either to forestry work or moth extermination, as in his judgment it might be deemed best, and thus give a small but well trained set of skilled men constant employment. In the short time we have had to test it the plan has worked well both as regards labor and efficiency.

RAILROAD PARK.

Railroad Park is so situated that little can be done aside from keeping the place green and the trees upon it in good order. The experiment of putting a barberry hedge upon it has been tried, but the drought and the reckless disregard of pedestrians has succeeded in ruining the most of it. The benches were taken out of this park at the request of many citizens who objected to the character of those who monopolized them and



MONUMENT PARK

FALLS AT FALULAH PARK



the impression it gave one on entering the city by the railroad station.

UPPER COMMON.

Aside from trying to keep the lawn in good condition we have tried to maintain a few flower beds. Barberry was also planted at the head and foot of the Common and at the end of the walks to keep the pedestrians from cutting the corners, but has proven entirely unsuccessful. The Commission are rather inclined to return to the old method of simply keeping the lawns in good condition without embellishment of plants and shrubs. The other small parks have been maintained in the usual good condition, but like the lower ones suffered from the extreme drought.

TREES.

For a number of years it has been very evident to the Commission that if we were to preserve the trees, encourage the growth of new ones, and interest the public in the matter, something more than an occasional glance at the trees would have to be taken and the work of caring for them entered upon in a regular and systematic manner. For a number of years very little had been done for their care and preservation owing to the small amount of money appropriated for that purpose. It appeared very clearly that the time had arrived when the trees must be given serious consideration and attention, otherwise the city would lose hundreds of valuable and beautiful trees that would take years if they could ever be replaced. To the end that the matter might be under the care of skilled and competent hands a City Forester—under the direction of the Park Commission—was appointed by the Mayor. The City Forester is also superintendent of the moth work, so that now all the work under the care of trees, the suppression of the gypsy and brown tail moth, and the care of parks, is conducted from the office of the Park Commission. In Mr. William W. Colton, City Forester, the city has an able and competent public servant and one thorough with his duties and the work required.

Good work has already—much remains to do—been done by the City Forester and his assistants in trimming up and

surgically treating those trees that were in need of it, and removing the trees that had died and were interfering with growth of others. A detailed report from the City Forester is appended and is made a part of the Commissioner's report. His notes and comments are interesting and instructive and will show very clearly the necessity of having the trees thoroughly and systematically looked after. The City Forester will give in detail the work accomplished in connection with the gypsy and brown tail moth and also the necessity for persistent and continuous work in this direction.

In connection with this work, and under the direction of the City Forester, the Commission desires to start a tree nursery for the purpose of planting and raising our own trees, as it has been shown that cities that maintain a nursery can replace old and put in new trees at about one-third of the expense that it costs to buy the trees from outside parties. The City Forester speaks of this in his report and his remarks are deserving of serious consideration on account of use and utility, reducing the cost of trees in our highways and parks, and putting our work on a scientific and utilitarian basis.

Coggshall Park fills a real need in the wants of the city and ministers to the comfort and desire of a very large number of people who love the woods, hills and streams; it accommodates a large part of our population. But there are hundreds of others who would like to enjoy the benefits and privileges of a park provided it were located a little nearer their homes. Coggshall lies on the south side of the city, and while easily accessible both by road and electric cars it seems a long ways off to those living in the north part of the city.

At the time the Burbank Hospital estate was bought objections were raised to purchasing so much land. These objections were met, however, by the statement that the land should be bought, and what was not needed for hospital purposes could be turned over to the city for park purposes. It seems to the Commission that the time has come when this can fairly and equitably be done, for the annual appropriation made by the city for the support of the hospital outside of that coming from the Burbank fund represents a generous interest on 200 acres of land that might be devoted to park purposes. We believe that the land should be opened up and the people given the benefit of it. We



SCENE IN PROPOSED BURBANK HOSPITAL PARK

would, therefore, call this to the attention of the City Council, and would recommend that at least 200 acres of land from this estate be taken and set aside for park purposes, as it is well located and in good condition for such use. While it will be used more generally by the people in the north part of the city than in the south, it will be very generously patronized and enjoyed by people from all sections of the city and prove a boon and benefit to every one in it. We earnestly recommend this to your consideration.

PLAYGROUNDS.

The advantage of the playgrounds to the children of the city is now so clearly recognized, and its influence for the moral and physical development of children so clearly demonstrated, and its beneficent influence in influencing children for good and keeping them away from dark and evil influences, is now so generally recognized that our city can be congratulated upon the stand that it has taken and the advanced ground that we occupy in this respect. The good work began last year and has been successfully carried along, and we have now seven fine playgrounds well distributed throughout the city.

SALEM STREET PLAYGROUND.

One, called the "Salem Street Ground," was laid out on Beekman street, west of the Salem Street School. This piece of land, bounded by Cliff, Beekman, and extending 300 feet on Providence street, was, at the suggestion of the City Council, taken by the Park Commission for park and playground purposes and fitted up for a playground. The ground has been graded and put in good condition, and the arrangement of the ground is such that a division of the grounds has been made, one part being assigned to the girls and one devoted to the use of the boys. It is situated in a very closely built up district; is a good thing and meets a needed want in that section of the city.

SOUTH FITCHBURG PLAYGROUND.

At South Fitchburg the small piece of ground allotted last year was further increased by the City Council from a little plot to $11\frac{1}{4}$ acres. The upper part contains a pine grove and is well

adapted for small children and park purposes. The lower part is a rough, uneven piece of ground that can be, by a little expenditure of money, put in good condition, and the Commission trusts that the City Council will see its way clear to give them the money asked for to construct an atheletic field and ball ground. After this is done the playground will fill the needs of that part of the city for many years to come.

LOWE PLAYGROUND.

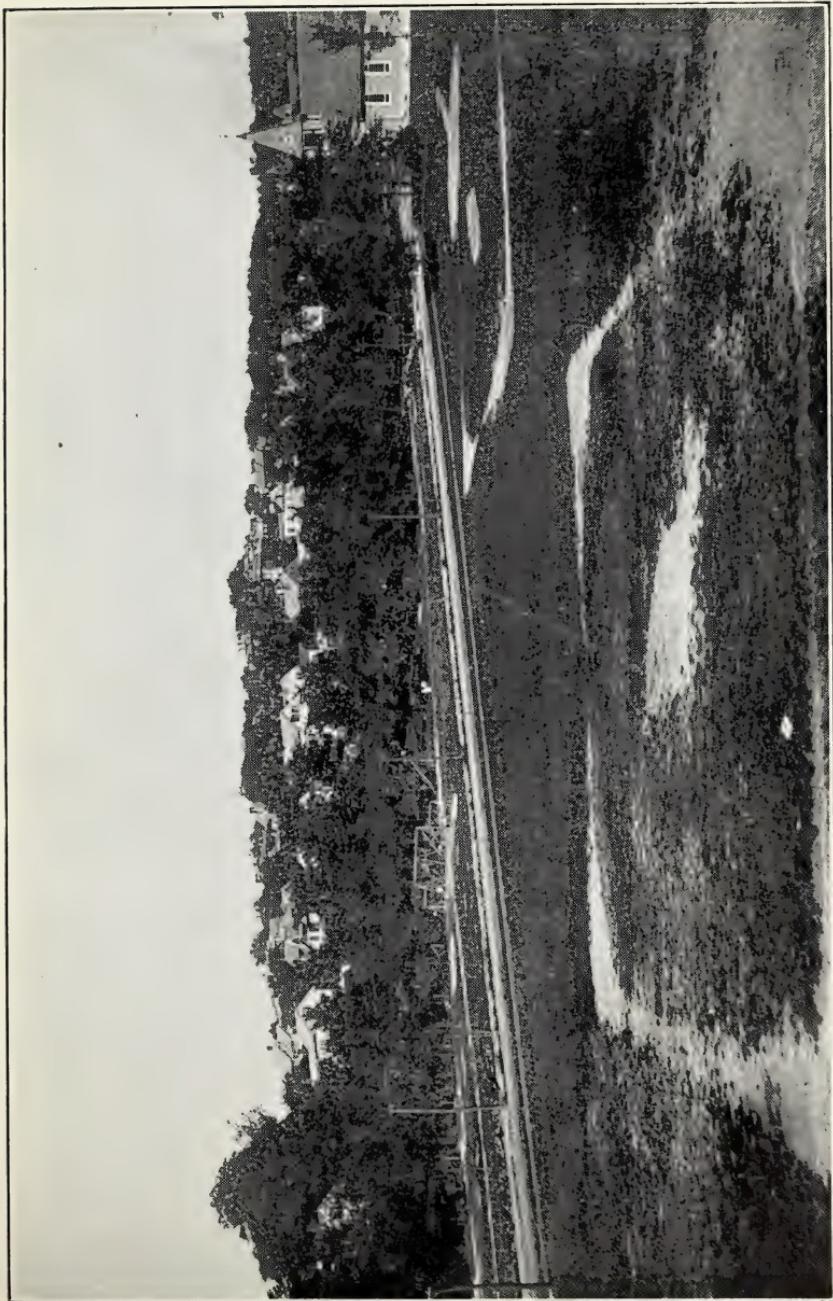
Lowe Playground is in constant use by hundreds of children almost the entire year and is a constant and glowing tribute to the wisdom and generosity of the donor. The Park Commission was given the use of a strip of land on the other side of Elm street to the west of Lowe Playground for the past year by Mr. Arthur H. Lowe, the donor of Lowe Playground. On this piece of land we placed several pieces of apparatus, and it has been constantly used by hundreds of children during the summer and fall. The thanks of the Park Commission and City Council are due and are hereby tendered to the Hon. Arthur H. Lowe for the use of the strip of land spoken of. This piece of land ought to be acquired by the city and made a part of Lowe Playground.

WALTON STREET PLAYGROUND.

Walton Street Playground, which includes a strip of land between Rollstone and Walton streets, was fitted up at considerable expense by the Commission in order to let the little children be taken care of on the Rollstone street side and leave the Walton street side for the ball ground and older children, and it has turned out to be a very good arrangement and a very successful playground.

MIDDLE STREET PLAYGROUND.

On the opening of Salem Street Ground Middle Street Ground was closed to all but children under ten years of age, and hereafter will be used only by the little folks, the older ones being sent up to Salem street.



LOWE PLAYGROUND

GOODRICH STREET PLAYGROUND.

Some filling was done, the ground cleared and some new apparatus was put into Goodrich street. The ground has been well patronized and constantly enjoyed by the children in that vicinity.

DANIELS PLAYGROUND.

Daniels Playground, next to Lowe, has proven to be the largest attended playground in the city. The grove of trees has made attractive places for the girls and children and the athletic field is large enough for the exercising of the older children.

Situated as they are upon an open and exposed knoll the trees are sadly in need of care and attention and in order to preserve them it will be necessary to add considerable loam and fertilizer to the ground there and also to trim and treat many of the trees that are in need of it. We ought to do something to preserve these trees for if they should die out, as they are inclined to do now it will be many years before they could be restored; certainly they cannot be in the life of this generation of children. It needs time and money to do it and it cannot be done without.

The Playgrounds during the past year have proven successful in every sense of the word. They have been well patronized and wisely and carefully conducted. In this connection it should be said that one of the prime and important factors to the success of a playground is good and constant supervision. An open field with little or no apparatus with a good supervisor makes a good and successful recreation ground, while a field with abundance of apparatus and no one to guide and instruct the children has proven to be a poor place for children as a center of recreation. The moral and physical well-being of children demand that they shall be looked after at play as well as at work, and that the children may get the most good and most benefit, play should be wisely directed, and certainly nowhere is it more essential than in the playground where there are hundreds of children of all ages from four to twenty years of age playing and working off their surplus energies. The importance of supervision cannot be too strongly insisted upon.

During the past year, we employed two supervisors and fourteen assistants, seven males, and seven females. Mr. E. S. Maxwell was with us during the opening of the season and remained during the month of July, when he resigned and went west. Mr. Ralph E. Fish was appointed supervisor to succeed him and he performed his duties in an excellent manner and to the satisfaction of the playground committee and the Park Commission. The assistants were all thoroughly in sympathy with the work and were alive and sympathetic and did much to promote the success of the movement.

It has been clearly demonstrated that those cities that have maintained properly located, well equipped, and well supervised playgrounds furnish a very small percentage, in fact the smallest percentage, of work for the juvenile courts. This has been so plainly apparent that no city that has ever inaugurated and developed the system, no matter in how slight a degree, has ever abandoned it. On the contrary they have done all that they could to increase and develop the grounds and the work connected with it.

For the honor, credit and good name of our city, we ought to forge ahead and not let the work lag or fall behind.

With the development of the playground idea and the provision that we are making for recreation and exercise by the children, there should be some provision made for shower baths and swimming pools.

Where the grounds are situated near a school house, by the cooperation of the Park Commission and the School Committee the schools can be made available for toilet purposes, and we trust that at an early date arrangements can be made for putting in shower baths in connection with the work of the playground. In most cities, pavilions are erected and waiting rooms and shower baths are built in the pavilions. This, of course, takes money and the Commission, while we would like to have the children have the benefit of the shower baths and swimming pools, are not in a position to furnish them, nor urging the matter at this time, although they hope to see the time when they will have shower baths and swimming pools in connection with every playground in the city.

In this connection, here is a splendid opportunity for some of our influential and generous citizens to help a worthy and



SCENES AT DANIELS PLAYGROUND

commendable object by either erecting, or donating sufficient funds, as has been done in some other cities—to erect, a bath pavilion in connection with one or more of our playgrounds. Such a gift will certainly be appreciated and the donor will not only be a benefactor to the city, but the children will always hold him or her in grateful remembrance.

As an indication of the interest and large attendance and the number who have been benefited—for we feel that all who have taken part or participated in the playground movement have been benefited thereby—it is interesting to read the figures of the total and average attendance upon the playgrounds and the large numbers that have been in attendance upon special days.

Total number for year,	83,497
Average for each playground,	11,928
Average daily attendance at all playgrounds,	2,084
Largest number for one day on any one playground,	943
Largest number at a playground,	21,482
Number of children between ages of five and fifteen in the city,	6,208
Number of children between ages of five and twenty in schools,	6,745

Therefore, we have reached approximately 33 3-5 per cent of the children between ages of five and fifteen in our city.

30 4-5 per cent of children in schools from five to twenty years.

GAMES TAUGHT.

Folk Dancing.	Gym. Drill.
Races.	Jumping.
Soccer Football.	Soccer Golf.
Sewing.	Base ball.
Apparatus.	Lodge Ball.
Swimming.	Touch Ball.
Steal Bag.	Guard Bean Bag.
Jump the Leader.	Snatch Bean Bag.

The season wound up with what was to be an open air festival on Circle street, but owing to the rain we were obliged to hold the exercises in City Hall, which were largely attended by parents and others interested and was participated in by children from the several playgrounds. A number of games were illustrated, and the folk dancing under the direction of Miss Magoun was an attractive and pleasing feature and was greatly admired by those who were fortunate enough to witness the exhibition. The dances were quaint and graceful and evidently heartily enjoyed by the participants as well as the spectators. The city festival was attended by hundreds, but had the weather been fair instead of a stormy and rainy day it would have been attended by thousands of admiring and pleased spectators.

The playground is the children's forum. Here the children are taught correct ideas as to honor, loyalty, fair play and consideration to others. Then again, it is the prime source of recreation and play for nine-tenths of our children, for while a few can be cared for and sent away for change and recreation the great majority of our children must be dependent upon the city and facilities it affords for enjoyment and for healthy centers of recreation.

We feel that the good results accomplished by the playgrounds have more than compensated for the outlay that has been made. The children have been surrounded by good, wholesome influences, kept from secret and undesirable places, and have been developed along good lines morally, physically and mentally. The whole movement tends to make them better children, more healthy, more wholesome, more loyal, more generous boys and girls, and will tend to make them good citizens. The work ought to, as it has in the past, receive the warmest and heartiest support of our city and city government.

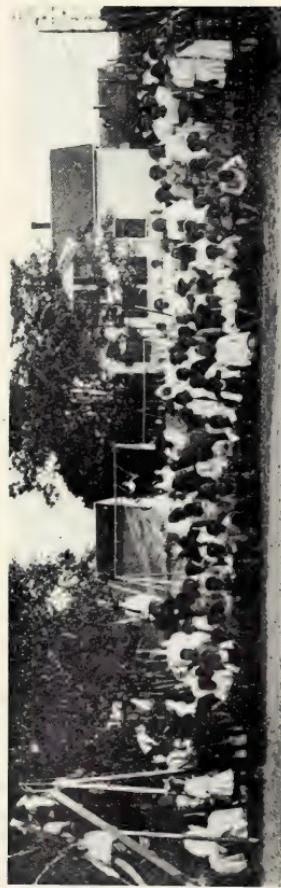
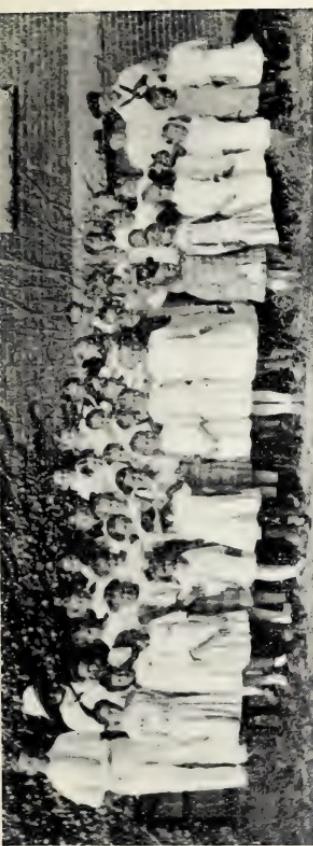
Respectfully submitted,

H. F. COGGSHALL, *Chairman*,
D. SIDNEY WOODWORTH, *Secretary*,
J. H. DANIELS,
H. G. TOWNEND,
JOHN SHIRREFFS,

Park Commission.

PLAYGROUND

GROUPS AND GAMES



REPORT OF SUPERINTENDENT OF PARKS AND PLAYGROUNDS AND CITY FORESTER

To the Honorable Board of Park Commissioners:

GENTLEMEN:—I have the honor to herewith submit my first annual report as Superintendent of Parks and Playgrounds and City Forester.

The above mentioned offices having been but just created this past summer I have had but a few months in which to familiarize myself with the local conditions. It will be impossible, therefore, for me to go into the work done in the past year in much detail.

It is a very essential item in all business enterprises that a strict account be kept of all moneys received and expended that it may be known how much is being expended on each separate department and subdivision. By this means it is easy to tell at any time if too much is being spent on any particular work to the neglect of any other or vice versa. For this purpose it is necessary to have an office with a properly equipped accounting system. As the detail necessary to run our parks and playgrounds was becoming too much of a burden for your secretary to care for it was thought best to establish an office at City Hall in conjunction with the Moth Superintendent and Forest Warden. These offices being already held by your Superintendent therefore condensed and brought under one head, so to speak, all departments pertaining to forestry and park work.

It has been our aim since opening the office at City Hall to make it a general information bureau for the benefit of the public as well as caring for the necessary work of the department. To accomplish this end and to keep a record of everything, we have had printed various blank forms to be filled out by applicants for labor, information, requests for work, complaints, etc. The regular clerk has been kept busy working on the necessary routine office work, and it has been necessary on several oc-

casions to have extra help for a few days. Your Superintendent has made a study of the accounting system used in various cities and we have worked out a plan by which it will be possible for us to be much more accurate in our accounting the present year.

PARKS.

In going over the figures available for our park areas, I have compiled the following table, showing the relative area, valuation, cost of maintenance, of our park areas. In obtaining the figures on maintenance, I have used a multiple obtained by taking the average of the percentage of valuation and area of each park as compared with the whole system. Coggshall park has been treated separately for reasons explained later.

PARKS	Areas Acres	Valuation	Multiple	Cost of Maintenance Per Park	Cost of Maintenance Per Sq. Yd.
Momument .....	.642	\$56,000 00	37	\$924 40	\$.297
Upper Common .....	.545	25,000 00	24	571 42	.217
Stanley.....	.484	2,700 00	13	256 40	.109
Lower Common .....	.231	38,000 00	9	209 63	.187
Cleghorn.....	.136	500 00	6	141 87	.231
Grant.....	.241	350 00	5	85 55	.073
Oak Hill.....	.162	2,500 00	3	59 25	.075
Wallace Way.....	.050	25,000 00	3	79 58	.329
*Armory.....	.....	.....	.....	.....	.....
*Faulah.....	.....	.....	.....	.....	.....
	2.691	\$150,050 00	100	\$2,328 17	

* No work done or charged to these parks.

Figures explain themselves and call for no more comment on my part.

Of the ten park areas named in the above list, only three can really be classified as true parks, and of these three one has not been worked at all and is, I should say, scarcely known of by the majority of the people.

A park in its true sense of the word is an open space in or near the congested part of the city large enough to give to the people of that city, or section of the city, a place where they can find pure, fresh air and a cool, shady place on hot summer days; a place open to the public, children as well as grown-ups,

that they can use as well as look at. Every city, especially a manufacturing city, needs a number of these places where cooped-up workers may go to be entertained in a healthful and useful manner. The modern idea of a park is not where thousands of dollars have been spent on beautiful fountains, lawns, shrubbery and gorgeous display of flowers, etc. These are all right in their place but they give to the ordinary person a feeling of must-not-touch or keep-off-the-grass-tiveness all the while. What the tired worker wants in his or her hours of leisure is a place that is beautiful, but also draws them to it by its show of peace and restfulness. In short, we need only to follow nature as far as we can and assist her in making a rest and healthful resort for our people.

As I have before mentioned, our parks are, on the whole, more ornamental than otherwise. Do not understand that I say they are not useful. The maintaining of beauty spots or "City Greens," (for that is really what our park areas amount to), is important also to the welfare of any city. The proper care of these greens in our city is what makes it attractive to the stranger passing through in his automobile. He may be so impressed by the cleanliness and beauty of our streets, trees, and greens, that he will want to come here to live. Even if he does not, he is liable to speak to his friends about it and thus we have spread a good word broadcast in favor of our city as a good place to live in.

Not all our parks are purely ornamental, however: We have Coggshall and Falulah Parks, which can be made into ideal parks in the true sense of the word.

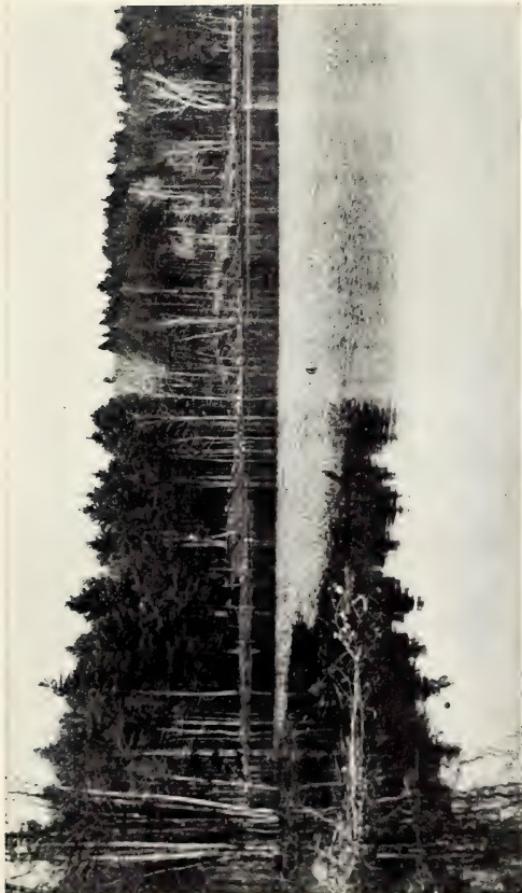
Falulah Park is a beautiful little piece of woodland situated on the Rindge road and adjoining the grounds of the Burbank hospital. All this needs is development to make it one of the prettiest spots in the state. Right here, I wish to make the suggestion that the movement be pushed to join this piece to that of the hospital tract and take over the whole or portion of the same to be developed under the Park Commission. We have here a tract of nearly 400 acres of land already owned by the city and which in turn joins more city land covering a portion of our water shed. The conditions here are ideal to make a beautiful tract that would give to the people of this section of the city what Coggshall Park is giving to the south side.

Coggshall Park is at the present time our only real park. A small amount of money has been expended up to the present time on its development, but a great deal of progress has been made in its improvement along different lines. Roads have been laid out, playgrounds established in the grove, swings and picnic tables installed in different sections of the park, and a base ball field laid out. The sum of \$2,415.85 has been expended here during the past year. This is an average of \$11.61 per acre, or \$.0024 per square yard. It will be readily seen by referring to the preceding table that the amount expended here on our only large park per square yard is very small compared to that spent in maintaining city greens.

One of the principle movements made during the year has been the pond, or Mirror Lake as it has been christened. This was developed at a small cost to the city by putting in a temporary dam at the outlet of the natural basin which contained a number of springs. It has succeeded in giving you a beautiful little lake of some six acres, which the children have certainly made use of the present winter. It will be necessary this year to allow the water to stand as it is in order to ascertain whether the supply from under ground will be enough to offset the evaporation from the surface. In case this does not result, it will be necessary to add in some way to the water supply. There are several available means of doing this if the necessary money is forthcoming.

The park now comprises 208 acres of rough and beautiful woodland. With a lake well established in its center, we have a foundation for its development. The land has great possibilities in this respect, but what we need now is a definite map and plan for its future development. Other cities have made the mistake in years past of developing their parks without a central working plan and are now spending millions to undo what they have already spent great sums in doing, but with the result that they have a heterogeneous mass of material instead of a concrete whole. We are now at a stage where we can profit by their mistakes and begin right.

The forestry problem here is also a complicated one. There is need of considerable thinning in the woodland in order to improve the present stand, and to eliminate as much as possible the fire danger. On account of several disastrous fires during



MIRROR LAKE, COGGSHALL PARK

the past year we have had about thirty acres burned over and the growth entirely destroyed. It has been thought best to remove the dead wood from this area this year, and I would strongly advise replanting it to white pine this spring. A large part of the hardwood is composed of chestnut, which it would seem is doomed for extinction within the next dozen years unless we find some remedy to stop the disastrous fungus disease known as the chestnut blight which is wiping out all the chestnut in this section of this country.

The present pine grove is nearly matured, and as using a forest floor for purposes of recreation, etc., shortens the life of the forest, we will have to look forward to the time when we will need a new pine grove for our pavilions and picnics. For this reason I think it is advisable to get more pine started here as soon as possible.

PLAYGROUNDS.

In speaking of city playgrounds there is very little to be said as the work has been conducted principally by your playground committee, and they have most of the facts in regard to it. I have, however, prepared a table similar to the one on parks showing the relative area, valuation of each ground, and the cost of maintenance of grounds, and the cost of supervision and apparatus. The last columns show the relative cost per square yard for maintenance of each ground, the cost of supervision and apparatus for each child in attendance during the season, and lastly the detailed cost, including maintenance of ground, supervision and apparatus for each child. I used the figures of the total attendance for the year in each playground.

REPORT OF PARK COMMISSIONERS

PLAYGROUND	Areas	Valuation	Multiple Per cent	Cost of Maintenance			- UNIT COST		
				Grounds	Supervision and Apparatus	Total	Per Square Yard		Per Child in attendance
							Sup. & Ap.	Total	
South Fitchburg	11.27	\$6,000	29	\$275 13	\$1,578 33	\$1,853 46	.005	\$.158	\$.186
Salem.....	1.881	8,200	26	898 62	1,415 05	2,313 67	.009	.344	.563
Walton.....	2.48	6,500	19	541 19	1,034 08	1,575 27	.0450	.105	.173
Daniels.....	4.372	6,900	11	87 96	598 68	686 64	.004	.028	.032
Lowe.....	3.24	17,000	8	59 24	435 40	494 64	.0037	.023	.026
Goodrich.....	1.862	5,000	5	28 67	272 13	300 80	.004	.033	.036
Middle.....	.422	6,900	2	38 00	108 85	146 85	.0019	.010	.014
	25.527	\$59,500	100	\$1,928 81	\$5,442 52	\$7,371 33	\$.0663		

As our playgrounds are still in the embryo stage it will be necessary to do considerable work on their improvement this year. There is some grading to be done at South Fitchburg in order to make a good base ball field. Other grounds need additional work on the ball fields also.

All the grounds, with the exception of Salem and Middle street, need attention to the trees. The pine grove at Daniels Playground is in very bad shape. More than a dozen of these trees are dead and others are dying. The grove is so exposed to the wind that the tops are bent and broken and the roots in many cases laid bare by the winds carrying away the fine soil. More trees should be planted here and new soil added to the present grove to rejuvenate it. The trees at Walton street grounds are also in bad shape and need somewhat similar attention, but here the trees are hardwoods, mostly chestnut. At Lowe Playground the hardwood grove near the retaining wall on High street should be thinned of all the dead and suppressed trees. The gypsy moth is intrenched here and a good thinning will aid the Moth Department in caring for the grove. Goodrich and South Fitchburg grounds are not in need of any particular attention this year. Salem street should have a number of trees set out on it as at present there is only one tree there.

All the grounds will need some additional apparatus and equipment this year. The experiment of leaving some of the apparatus on the grounds after the instructors have left has proven a failure in most cases as nearly all our chair swings are so badly broken as to need almost entirely new chairs. Many of the teeter boards are broken and several seats entirely demolished. All there was left of the equipment was moved to our new storehouse at 22 Franklin street. All apparatus is being renovated, repaired and painted during the winter and will be in excellent shape for another season.

The storehouse has proven a great saving to us thus far. It has been equipped with a work bench and a partial supply of tools for general repair work. As it has to be used for the general storeroom and workshop for the park, playground, tree and moth departments it has already proven much too small for our needs. There is not room enough left now to set up one of our chair swings to repair or paint it. We should have another

larger and better equipped storehouse more centrally located. The city will soon have to own a spraying outfit and there will be no room to store it. The present location would be a good place to store a sprayer, but another place would have to be provided for the park and playground apparatus. It would seem as if it were better for the department to own their own storehouse instead of paying rent for one.

FORESTRY DEPARTMENT.

The care of our shade trees is a department of the city work that has been very much neglected until recent years. The shade tree is the feature of the city that makes it attractive and worth living in during the hot summer months. What our shade trees mean to us can only be appreciated by one who has lived or traveled where there are none. In such places, the people fairly worship the cool and shade-giving tree that may be made to grow in that locality.

Fitchburg has been plentifully supplied with vigorous trees of all kinds, but like many other things, when we have plenty of them we do not appreciate them, so Fitchburg has not appreciated her blessings and has allowed them to go without caring for until now she is beginning to grow bald, so to speak.

My first duty upon taking up the work as City Forester was to ascertain how many shade trees you have and then of the condition they were in that I might know how much, or what kind of work, I would have to do. In order to obtain the information, I started a tree census by which means I will be able to not only know how many and what kinds of trees we have but where they are located, on what streets, whether near the abutter's line, near the line of curbing, or setting in the main street. This work has not as yet been entirely completed and checked on account of lack of time and funds. We have, however, arrived at some interesting deductions, some of which may be of interest to you. There are at the present time 1927 shade trees on the streets inside of the fire district. Of this number there were 41 different species represented, ranging from one to 43 inches in diameter. The following table shows the different species represented with the number of trees of each kind, also the number of trees from one to five inches in diameter and up:

684	Sugar Maple.	6	Sycamore Maple.
528	American Elm.	5	Sweet Chestnut.
156	Red Maple.	4	Lombardy Poplar.
92	White Pine.	4	European Linden.
62	White Oak.	4	Aspen.
59	White Ash.	4	Locust.
47	Black Oak.	3	American Linden.
45	Red Oak.	3	Pignut Hickory.
35	Horse Chestnut.	2	White Birch.
26	Black Cherry.	1	Catalpa.
24	Silver Maple.	1	English Ash.
23	Norway Maple.	1	Red Spruce.
18	Cut Leaf Maple.	1	Scarlet Oak.
15	Cotton Wood.	1	Pitch Pine.
14	Balm of Gilead.	1	Sassafras.
15	Cult. Apple.	1	Cut Leaf Birch.
8	Butternut.	1	Mountain Ash.
8	Hickory	1	Slippery Elm.
8	Red Cherry.	1	Green Ash.
7	Gray Birch.	1	Pear.
6	Box Elder.		
	Total,	1927	

Trees	Inches Diam.	Trees	Inches Diam.
228	1-5	69	25-30
341	5-10	26	30-35
517	10-15	2	36
458	15-20	2	38
248	20-25	1	41
		1	43

These trees have been classified according to health under the following heads:

	Tops		Trunks
254	Perfect.	420	Perfect.
577	Good.	597	Good.
744	Fair.	502	Fair.
239	Doubtful.	249	Doubtful.
62	Poor.	105	Poor.
22	Bad.	25	Bad.
19	Very Bad.	15	Very Bad.

A record of all these facts has been kept at the office. I have established a card system by which every tree is given a card. These are indexed under streets. By means of this system, we will be able to know how much money is expended on any certain tree, or on any one street, or any one ward. We also know how many trees there are on each street, and how many streets have no trees.

In the three months the forestry work has been conducted \$725.18 has been expended. Of this amount \$243.20 has been returned to us for work done on private estates and for damages to city shade trees. Up to the present time our work has consisted mostly in removing dead trees and pruning the dead wood from a few of the most dangerous specimens. Much more work is necessary to put our remaining trees in a safe condition and to insure to them a long and healthful life. Of our 1,927 trees 166 have cavities of more or less size which all need tinning or cementing to keep the gypsy moth out and to prevent fungus diseases from entering; 26 have crotches or bad forks that need bracing by means of bolts or chains to insure them from splitting; 180 have injuries of a more or less serious nature that need attention; 42 have boiler plate guards that are now injuring the trees and should be removed; 115 have wire guards that have been imbedded in the growing tree until they are girdling and killing it. Of the entire number of street trees only 289 have guards of any kind, and 173 of these need removing so that practically all of our shade trees that stand near the curbing need new wire guards. Besides this work many of the trees listed as dying or in poor or bad condition are in need of rejuvenation. In order to accomplish this result a system of under drainage should be installed which would bring the necessary amount of water and food material to the starved roots that are struggling against the adverse conditions of our city paving and sidewalks to obtain the necessary food for keeping their branches green. More work is also necessary in the pruning of trees and more trees are badly needed.

No definite list of the parasites attacking our shade trees has been attempted, but in making out our tree census a few of the principle kinds have been noted. Among these are the gypsy and brown tail moth, several forms of the tussock moth, tent caterpillar, web worm, the green striped maple worm,

birch leaf skeletonizer, and maple, ash, elm and pine borers, a number of varieties of tree lice, including three varieties of scale insects, and lastly the elm leaf beetle. Of this list the gypsy and brown tail moths are taken care of by the moth department. The rest of them, with the exception of the elm leaf beetle and the borers, are not dangerous at the present time. Elm leaf beetle is the most serious. This pest has become firmly established on practically all our elm trees. In order to save them from immediate destruction it will be necessary for us to spray the elms during the month of May with a solution of arsenate of lead. The only way to treat this question practically is to buy a power sprayer which will, with the equipment of hose and accessories, cost about \$1,500. It would be necessary for the city to purchase a sprayer for the moth work within a year or two at the least, and it would be better economy for us to get it now and save our elm trees than to wait until they are all dead and then get the means of saving the others.

Only 192 streets out of the total number of 414 in the city have any shade trees on them; 222 having no shade trees at all. Nearly all of these streets need trees and many of the others need more trees than they now have. In order to fulfil the demand for shade trees in our streets, parks and playgrounds a large number of trees will have to be purchased from the nursery men that will cost from \$1.00 to \$5.00 each. A great share of this expense would be saved if a municipal nursery was started at some convenient place, as at Coggshall Park for instance. Other cities have tried this scheme and find it saves them large amounts. The borough of Brooklyn, city of New York, has a nursery containing 70,000 trees which cost the city \$.01 a piece and which are now worth from \$.05 to \$.50 a piece.

It would only be necessary at first to raise hardwood trees for street plantings, but if arrangements can be made later enough pine and spruce and other forest trees could be raised to supply the water department for reforestation of their water sheds, Burbank hospital for their lands, and for the work in Coggshall Park. Fitchburg should be a pioneer in establishing a municipal forest and show the way to the other cities in the country. An actual revenue can be obtained from the proper management of the forest we already own if combined and

made into a small municipal forest. This should be the ideal towards which we work in the future.

RECAPITULATION OF ACCOUNTS.

Coggshall Park,	\$2,415 85
Upper Common,	455 31
Monument Park,	745 29
Wallace Way,	65 05
Lower Common,	166 07
Cleghorn Park,	112 83
Oak Hill,	44 72
Stanley,	193 47
Grant,	61 34
	—————
	\$4,259 93
Lowe Playground,	\$59 24
Walton Street Playground,	541 19
Daniels Playground,	87 96
Middle Street Playground,	38 00
Salem Street Playground,	898 62
Goodrich Street Playground,	28 67
South Fitchburg Playground,	275 13
	—————
	1,928 81
Playground apparatus,	\$3,064 93
Playground supervision,	1,893 50
Office maintenance,	321 30
Office equipment,	142 73
Storehouse equipment,	8 26
General administration,	18 48
Incidentals and repairs,	447 41
Shade trees,	725 18
	—————
	6,651 79
	—————
	\$12,840 53

RECEIPTS.

Appropriation,	\$4,000 00
Shade tree account, private work,	243 20
	—————
	\$4,243 20

EXPENDITURES.

Total expenditures,	\$12,840 53
Receipts,	4,243 20
	—————
Balance overdrawn,	\$8,597 33
Valuation of Parks and Play-	
grounds,	\$217,650 00
Playground equipment valuation,	4,501 10
Coggshall Park equipment, inventory,	303 35
Storehouse equipment, inventory,	228 25
Office furniture,	225 00
	—————
	\$222,907 70

It is interesting to know that in other cities of our size, as Newton for instance, which has a population exactly the same as Fitchburg, \$8,353.83 was spent on parks, \$6,190.90 on general tree work, and \$51,249.01 on moth work. This for a city of our own size. Malden, Mass., of practically the same population, has an appropriation of \$21,000 for park work alone. Holyoke, Mass., spends \$20,183.28 on parks and \$8,503.53 on playgrounds; New Bedford \$33,034.19 on parks and \$5,976.91 on playgrounds, while Harrisburg, Pa., which has a population of little more than one-half as much again as Fitchburg spends annually \$93,710 for public parks. It is a well established fact that a city should appropriate from three to five per cent of their total amount expended to be used for the maintenance and promotion of parks, playgrounds, trees, etc. Fitchburg spends about two per cent of this amount. Five per cent of our annual appropriation would be \$21,500. A tax of \$.001 per dollar on the assessed valuation of the city is often allowed as a fair proportion to be used for park work. This amount would give Fitchburg an annual appropriation of \$32,000 and over. That we may obtain as large a proportion of this amount as possible it is necessary for us to arouse public sentiment in favor of the movement. To do this, we must endeavor to keep it before the

public as much as possible that they may know what is being done and how their money is being expended. In order to see that the money is properly expended, it is necessary also for your Superintendent to travel from one end of the city to another. In many instances he is wanted in several places at the same time. It has been impossible in the past to attend to all the requests for inspection of trees and other work outside of the regular city park and tree work as he could not be in several places at once. I would, therefore, urge upon you the necessity of providing the Superintendent, and at the same time your Commission, with a quicker and more serviceable means of reaching the various places where it is necessary to look after the work in the course of the day.

Respectfully submitted,

WM. W. COLTON,

Superintendent of Parks and Playgrounds and City Forester.

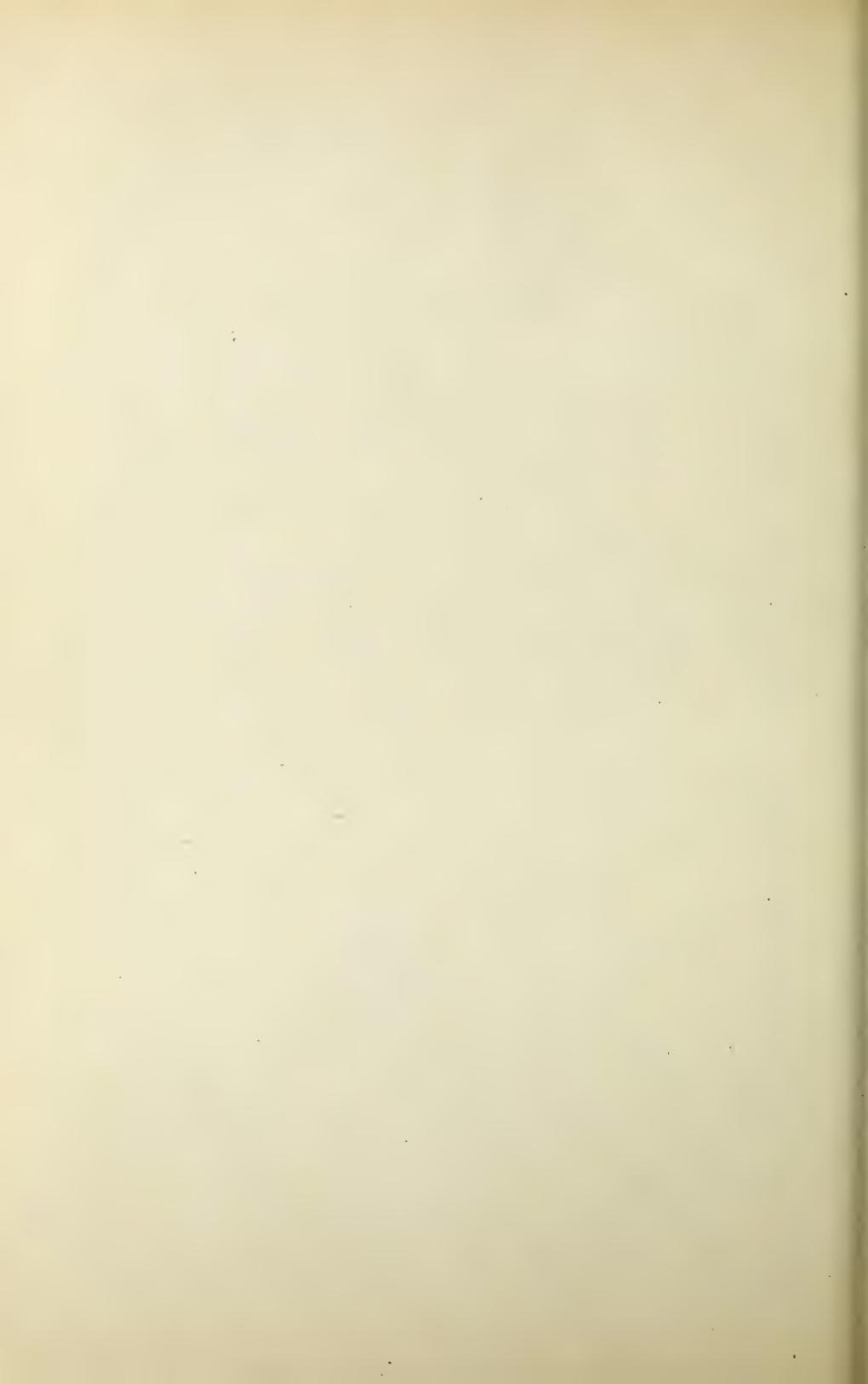
ANNUAL REPORT
OF THE
SUPERINTENDENT OF
GYPSY AND BROWN-TAIL
MOTH WORK

OF THE
CITY OF FITCHBURG
MASSACHUSETTS

1911



FITCHBURG :
H. M. DOWNS PRINTING CO.
1912



REPORT OF SUPERINTENDENT OF GYPSY AND BROWN-TAIL MOTH WORK

FITCHBURG, MASS., Dec. 1, 1911.

To His Honor the Mayor and Board of Aldermen.

GENTLEMEN:—I have the honor to herewith submit my first annual report as Superintendent of Gypsy and Brown-tail Moth Extermination Work. During the year preceding my appointment and under the administration of my predecessor, the work of exterminating the moth pest had been carried on very energetically. During the winter of 1910 and 1911, the nests of the brown-tail were removed from trees on every piece of property in the city, as far as possible.

Early in the spring, work was begun for the first time on the closing of cavities in trees, by means of strips of zinc or tin tacked over the opening, the strips being tacked after the cavity had been carefully treated to assure the healing of the wound and covering of the zinc by new wood. This work was done to confine to the cavities the eggs of the gypsy moth, which might have been deposited there during the preceding summer, and thereby escape the eye of our scouts. It also prevents their hiding there another year. Only a very small amount of this work was accomplished last spring as compared with the amount that should be done in this city.

During the latter part of May and June, there were 4712 burlaps put on trees scattered over all sections of the city. These burlaps were put on wherever the eggs of the gypsy moth were discovered, and trees burlapped a distance of 50 feet from the point where the nest was found. During the summer, these burlaps were visited by employees of the moth department and all caterpillars found under them were crushed.

Thanks to the keen interest taken in the work by my predecessor, I have found conditions very favorable as far as the general spread of the moth is concerned. Since the first of

August, I have found it necessary to make a number of changes in the department which I hope will work out to the benefit of the City. These are due mostly to the fact that conditions are changing and that the problem must be dealt with differently now than when the City was first infested. We have reached the stage where the City is pretty generally infested with gypsy moths, and it will be necessary for us to fight them with every means available if we expect to keep them from getting the best of us.

Our scouts started in September in their annual quest for the nests of the gypsy moth. Up to the present time they have reported having found 13,000 nests. We still have about one-fifth of the city to cover and indications would point to our finding about 18,000 nests in the city this year. All these nests are treated with creosote to kill the eggs, and a record kept of all properties and locations where they are found. Next year these places will be burlapped and everything possible done to exterminate the moths on these places.

It is our intention to do considerable tinning again next year. This is one of the most important items of gypsy work. It is the habit of the gypsy moth to seek the most sheltered and inconspicuous place possible to lay its eggs. Therefore a cavity in a tree is one of the best places for them to go. If we can fill or cover up all these holes then it will be much easier to find the nests and to control the spread of the moth.

Let us take two orchards for instance, both being of equal size and value; one where none of this work has been done and one where all the old cavities have been filled and the worthless trees taken out. In the first one the men go through it and clean up all the nests in sight. Next year the place is burlapped and thousands of caterpillars are found under the burlaps. In the fall we look the place over and still find plenty of nests so that the same amount of work has to be gone over again at the same cost to the owner. Now, let us take the second orchard. All the trees there have clean, smooth trunks and limbs. The scouts cover this orchard treating all the nests in one-half the time it took to pry into all the cavities and holes of the first. They have reached every nest in sight. As there are no cavities or hiding places for them there will be no necessity of putting on burlap this summer, and the following fall the chances are there

will be only a few gypsy nests found and much less time taken in finding them. This shows us that the cost of maintenance has been decreased, and not only that but the life and productivity of the orchard has been increased by the simple outlay of the extra money it originally takes to put the orchard in good condition. This is really the first principle to be learned in successfully combating the gypsy moth, and results in the cheapest way in the end. It is much better to maintain a few good trees than a lot of poor ones.

In this same matter it would be well, perhaps, to mention the resistance of certain trees to the ravages of the moth. The gypsy moth, as is well known, will attack and eat the foliage of practically everything that grows. About the only trees exempt from it are the ash and arbor vitæ. The brown-tail moth is more fastidious and will not attack any of the coniferous or evergreen trees. There are also a number of hardwoods which are exempt from its attack. The following list will give some idea of the resistance of the different trees. Beginning at the top of the column marked "Resistant" are those trees which are not attacked by gypsy or brown-tail, and running down to those occasionally attacked when other food is scarce. Beginning at the top of the other column are the trees which are attacked by both gypsy and brown-tail, showing the order of preference as food trees. The last part of both columns below "X" are so merged together, however, that there is very little choice.

RESISTANT	NON-RESISTANT
Ash	All fruit trees
Arbor vitæ	Wild cherry
Ailanthus	White oak
Gingko	Gray birch
Tulip	Paper birch
Sycamore	Willows
Catalpa	Hawthorns
Juniper	Hornbeam
Magnolia	Red oak
Linden	Black oak
Horse Chestnut	Scarlet oak
Beech	Cottonwood

RESISTANT	NON-RESISTANT
Fir	Balm of Gilead
Spruce	Yellow birch
Hemlock	Witch-hazel
Larch	Hop hornbeam
Pine	Elm
Sweet gum	Hackberry
Sassafras	Locust
Sumach	x
Tupelo	Mountain ash
Chestnut	Mulberry
Butternut	Persimmon
Hickory	Shadbush
x	Pin oak
Black birch	Silver maple
Alder	Red maple
Box alder	
Sycamore maple	
Norway maple	
Sugar maple	

It will be our aim in the future, in treating the city trees, to save, wherever possible, the species classified as resistant and do away with the non-resistant. This is especially true in regard to woodlots and woodland colonies. If the white oak, cherry and birches, especially, were eliminated from the woodlands, the chance of its becoming badly infested would be lessened a great deal. It would also lower the cost of cleaning and caring for a piece of woodland such as a public park or grove.

This department has already started its work of cleaning the brown-tails for the coming winter. It has been thought best to inaugurate a triplicate system of keeping the amount of work and charges made on private property. In accordance with this new system a bill will be made out by the foreman when the work is done, and handed to the tenant or owner when owner is within reach. This bill may be paid at the office of the superintendent, or, if not paid before May 1st of the following year, the amount will be charged to the owners' taxes. A copy of this bill will be returned to the office, and a second copy retained by the foreman. It is hoped that this will aid the people in becoming more familiar with the work, by giving

them a chance to know when the work is done, and to question the foreman if necessary in regard to it. It will also give everybody the opportunity to pay their moth bill in advance and not have it go on their tax bill. Many people have previously objected to the latter method and requested that they be allowed to pay their bill when the work is done but, heretofore, we have had no regular system for accomplishing this result.

Upon the present incumbents taking over the duties of this office it was thought best to combine the work with that of the Park Commission in as far as office duties and expenses were concerned. As your superintendent is to act as City Forester and agent of the Park Commission, we joined hands and after obtaining permission to establish an office at City Hall, it was agreed to share expenses of the equipment and maintenance of the same. It is now our policy to divide equally all bills pertaining to such above expenses, as salary of superintendent, clerk and general office supplies. Through the generosity of the City Property Committee, the expense for our office furnishings was charged to its account.

The establishment of this office, and the employment of a clerk has already proven of much value to us. The office is now open from eight to twelve a. m., and one to five p. m. Our clerk is prepared to answer questions, or take requests for information on any subject pertaining to forestry or moth matters. We have a limited amount of literature on the above subjects for distribution to those interested enough to call for it. Complaints made at the office, or telephoned to the clerk, are filed and investigated by the superintendent as soon as possible.

That more interest has been taken in the work this year is shown from the fact that we received 390 answers to our moth notices, 219 requesting an extension of time and 155 asking that the employes of the moth department do their moth cleaning work for them. Twenty-seven people have made requests for information about the work and some have entered complaints. In most cases an explanation of the importance and nature of the work has satisfied the complainant. A few people have taken advantage of the chance to gain knowledge, and have brought to the office specimens of moths and various insects to be identified. Anything in this line the superintendent is glad to do.

One of the first duties of this office is to enlighten the public as to the nature of this work and why we have to do it, and the superintendent stands ready at all times to explain, to the best of his ability, anything in connection with the work. The employes and especially the foremen are expected to answer all reasonable questions with promptness and politeness. Any discourtesies on their part, if reported, will receive our immediate attention.

The financial report of the moth work is as follows:

EXPENDITURES.

December, 1910.

Supplies and tools,	\$16 16
Labor, Brown-tail work,	298 00
Salary of Superintendent,	30 00
	—————
	\$344 16

January, 1911.

Supplies,	\$15 32
Labor, Brown-tail work,	391 97
Salary of Superintendent,	30 00
	—————
	437 29

February.

Team hire and transportation,	\$6 60
Labor, Brown-tail work,	406 48
Salary of Superintendent,	30 00
	—————
	443 08

March.

Tools and material,	\$22 35
Team hire and Brown-tail work,	20 00
Labor, Brown-tail work N. W. section,	46 50
Labor, Brown-tail work, city,	464 91
Salary of Superintendent,	30.00
	—————
	583 76

April.

Labor, Brown-tail work, N. W. section,	\$51 50
Labor, Brown-tail work, city,	245 35
Salary of Superintendent,	30 00
	—————
	326 85

May.

Material and equipment,	\$136 85
Team hire,	63 50
Labor, tinning,	136 85
Labor, burlapping,	78 41
Salary of Superintendent,	30 00
	—————
	\$445 61

June.

Team hire,	\$37 00
Labor, burlapping,	52 52
Labor, turning burlaps,	96 49
Salary of Superintendent,	30 00
	—————
	216 01

July.

Material and equipment,	\$19 40
Team hire,	31 50
Clerical work for the year,	40 70
Labor, turning burlaps,	106 99
Salary of Superintendent,	30 00
	—————
	228 59
	—————
	\$3,025 35

August 1st to December 1st.

GENERAL ADMINISTRATION.

Office maintenance,	\$158 45
General expenses,	23 24
Transportation,	54 82
Salary of Superintendent,	150 99
Material,	30 22
Equipment,	25 72
Labor, Gypsy Moth scouting and cleaning,	344 19
	—————
	787 63
	—————
	\$3,812 98

RECEIPTS.

Appropriation,	\$1,500 00
Receipts from taxes 1910-11,	1,840 14
	—————
	\$3,340 14

SUMMARY.

Total expenditures,	\$3,812 98
Total receipts,	3,340 14
Deficit,	\$472 84

As you will readily see from the above report, the amount of money appropriated was not sufficient for our needs this year. This coming year, as I have already stated, we have a much greater distribution of the gypsy moth to fight, and with our regular work on the brown-tails, we will need considerable more money than was appropriated this year.

To many it may seem a hopeless task to continue to fight these pests year after year. Many people ask the question, "What is the use of cleaning your orchard or shade trees when the neighboring woods are full of moths?" The answer is that every time you clean your shade trees of brown-tails or gypsies you save it one more year from destruction and every time you clean your orchard, you save your fruit for that year. Potato bugs come back every year regardless of how much care you take or how much money you expend, yet you wouldn't think of saying, "What is the use of spraying these? The air is full of them somewhere else and we are bound to have them next year." The same principle holds good in regard to the brown-tail. We have to do the same regarding our orchard and shade trees as we do with our garden products and care for them each year if we wish to save them. As I have said before, if they are not of any value to you as shade trees, or for the crops they bear, cut them down, but go slowly about cutting down valuable trees.

There is hope of yet controlling the gypsy and brown-tail moth. The state and United States government are spending thousands of dollars yearly, experimenting and finding natural enemies for them. These are being liberated, some each year, and will in all probability, control both pests in the course of a dozen or more years. It must not be expected that these parasites will show any immediate effect on the destruction of the moth. It took the gypsy moth 21 years to breed in large enough numbers to become a pest. They were introduced in this country in 1868 at Medford, and not until 1889 was there

any attempt made to fight them. It is not reasonable, therefore, to expect the parasites of these moths to make a great devastation in their ranks short of five or ten years, even with the aid of artificial distribution. Several diseases have also been introduced into both moths, and this year great havoc was created in the ranks of brown-tail moths in this section. Some parts of our city are almost free from the brown-tails this winter. While this does not assure us of being free of them next year it is encouraging. *Monodontomerus æreus*, one of the best of the imported parasites on the pupa of the brown-tail moth, has been found hibernating in their nests here this winter. Diseases of both will be introduced during this winter and we hope in this way to aid the people in their hand method of combating them.

In the meantime it is necessary, however, to continue with unabated energy our fight by every force known to us. In order to do this I ask that you give us sufficient money for the following purposes:—

To continue the policy of maintaining a general bureau of information at the City Hall office.

To thoroughly clean both pests from all properties, both city and private.

To put all trees in the city in better condition to withstand their attack.

To clean the back roads of non-resident species of trees.

To co-operate with the land owners for the care of their shade trees, orchards, and woodlands.

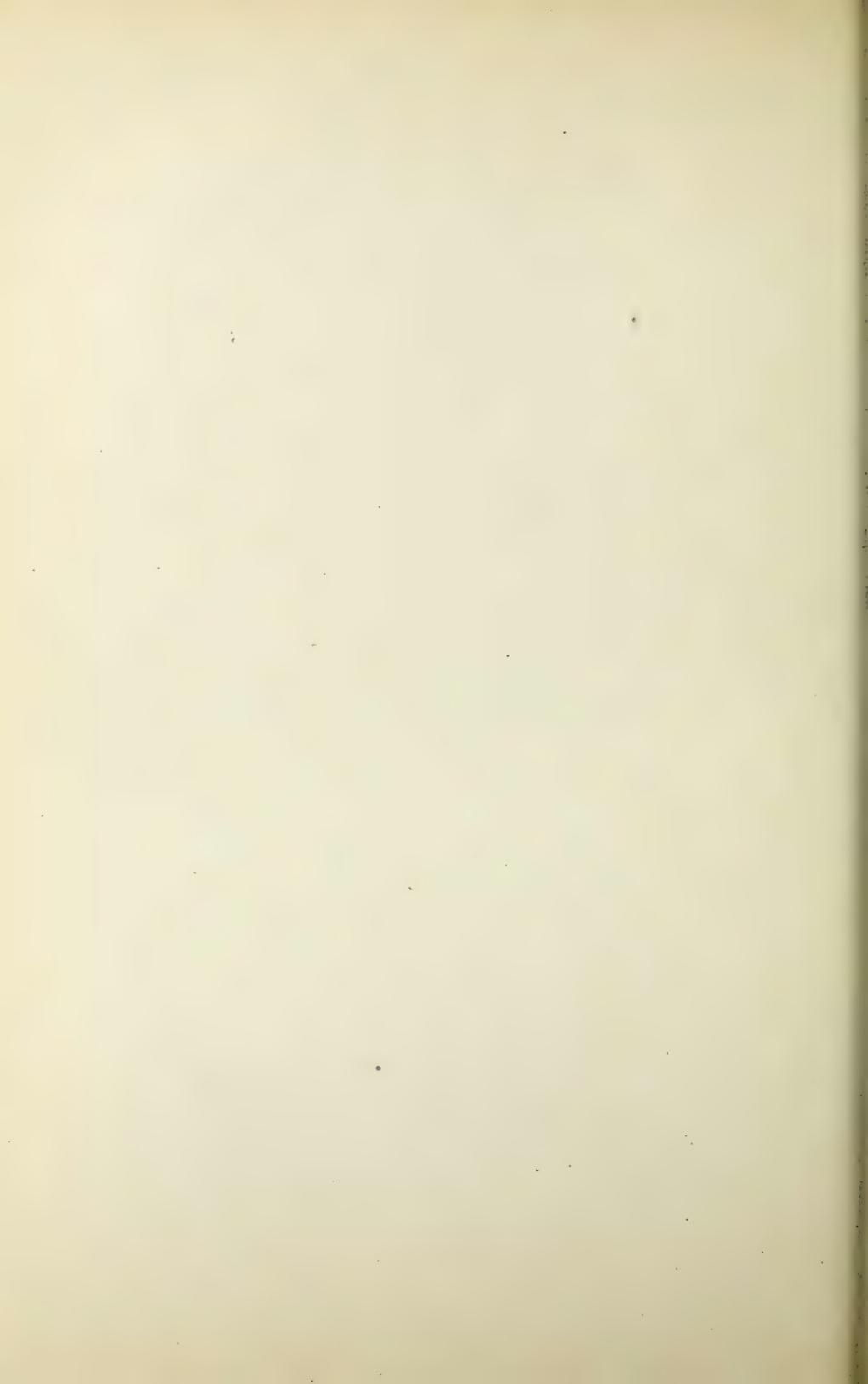
To generally maintain a more efficient working force by supplying them with the latest equipment and materials with which to work.

In conclusion I wish to thank the Mayor and Board of Aldermen, the City Government, the officers in City Hall, and the newspapers who have aided me—a stranger in your city—to become acquainted with the people and conditions and have in every way shown me courtesy and co-operation.

Respectfully submitted,

WM. W. COLTON,

Superintendent of the Gypsy and Brown-tail Moth Work.

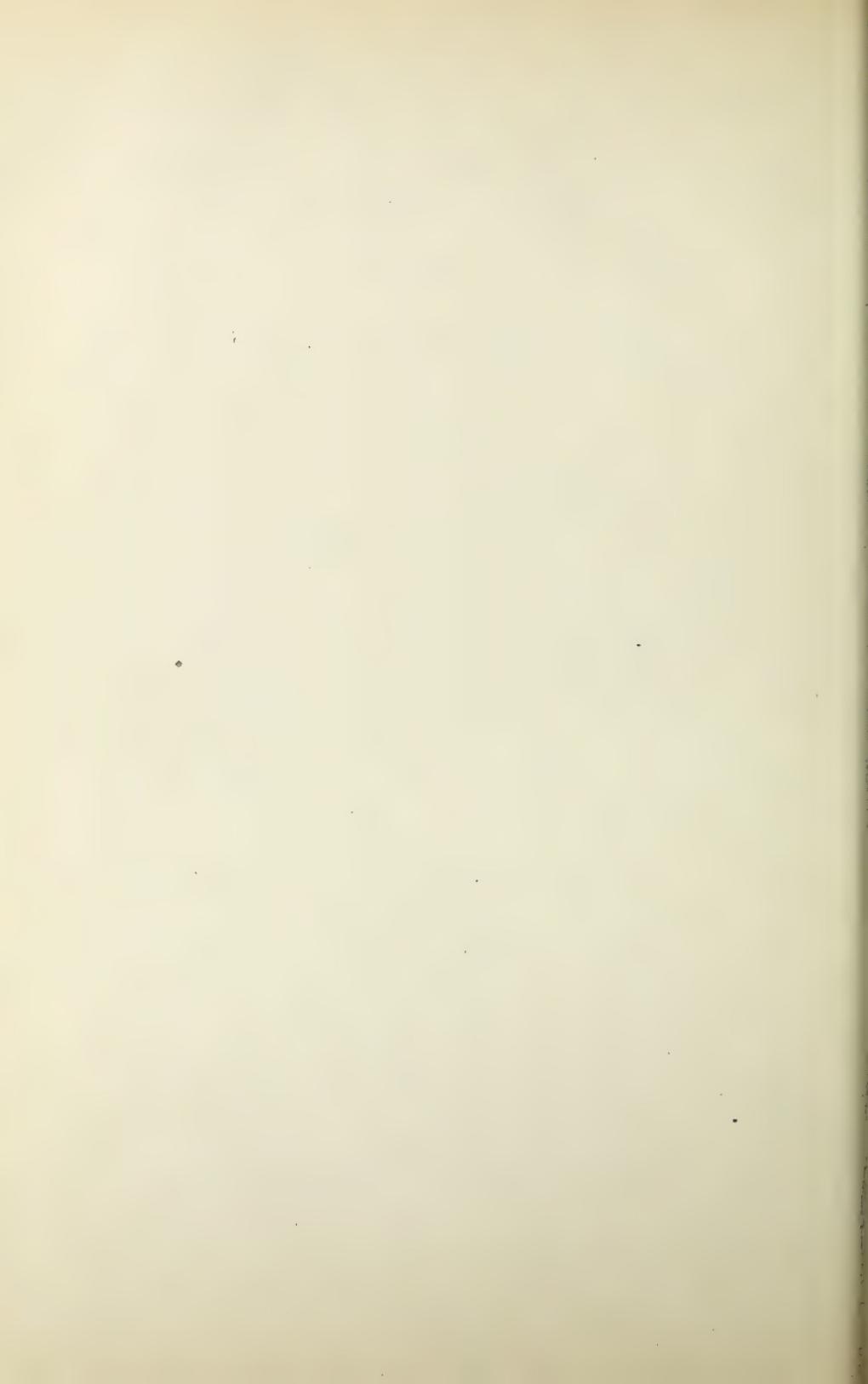


ANNUAL REPORT
OF THE
FOREST WARDEN
OF THE
CITY OF FITCHBURG
MASSACHUSETTS

1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912



REPORT [OF THE FOREST WARDEN

To His Honor the Mayor and Board of Aldermen:

GENTLEMEN:—In accordance with the statutes I herewith submit my first annual report as Forest Warden of the city of Fitchburg.

Previous to the creation of this office the duties of the Forest Warden were very successfully filled by the chief of your fire department. It is due in a large measure to his efforts and to those working under him that we have had so little damage from forest fires in this city.

According to the arrangement made with the State Forester's office the duties of Forest Warden, as far as the control of fires is concerned, will still be under the direction of the fire chief, as he is the logical person to carry on this end of the work.

To comply with the request of the State Fire Warden five Deputy Forest Wardens have been appointed as follows:

Mr. C. Leroy Grubb, Scott road, Deputy Forest Warden for the northwest section.

Mr. Henry A. Benedict, High Rock road, Deputy Forest Warden for the Pearl Hill section.

Mr. George H. Harrington, Oak Hill road, Deputy Forest Warden for Oak Hill section.

Mr. George A. Cutting, Damon road, Deputy Forest Warden for No-Town section.

Mr. T. F. Murnane, Chief of Fire Department, as Chief Deputy Forest Warden for the city.

As the statutes of Massachusetts now compel all persons setting a fire in the open between the first day of March and the first of December to obtain a permit for the same, except under certain restrictions, it was necessary for us to obtain a supply of blank permits from the State office. Badges were also supplied to the deputies as soon as they were sworn in. This necessi-

tated the expenditure of the sum of \$14, which was, with the advice and consent of the Mayor, charged to the moth account.

In order to put this department on a working basis it will be necessary for us to have a small appropriation of our own the ensuing year. Heretofore it has been necessary for the chief, in case of a fire in the outlying districts, to take a portion of his force from the city, thereby weakening the protection in the city proper, or to call in outsiders who have been paid out of the regular appropriation for the protection of the business section. Under the present system it will be unnecessary for the department to respond to a forest fire outside of the city proper unless called there by the deputy in whose district it occurs.

Each deputy is expected to respond to any call or notification from the State Lookout Station on Mt. Wachusett. If the fire is such that he can control it with what aid he can summon quickly, then he will attend to it alone, otherwise he will call upon the chief for help. Every deputy has the power to compel any able bodied man between the age of 18 and 50 years to aid in fighting fire. Any and all persons so enlisted must be paid by the city.

It can easily be seen that in case of a large fire it would be an easy matter to expend several hundred dollars on labor alone. This we hope will not occur, but in order to prevent such a contingency it will be necessary to take certain precautions. Every deputy should be furnished with an equipment for fighting fire such as a half dozen chemical fire extinguishers with material for reloading. These, along with shovels, rakes, hoes and other tools necessary can be kept handy and taken to the fire in an old spring wagon furnished by the deputy. Notices regarding the fire laws of the State should be posted in conspicuous places and everything done to co-operate with the State officials in their efforts to decrease the terrible forest fire damage done every year.

Anyone who has followed the papers for the past few months could not help but have noticed the account of the forest fires in Massachusetts this past year and what the State Forester's office is doing to diminish them. The figures of the State Fire Warden's report show that for the eleven months ending Dec. 1, 1911, over half a million dollars worth of timber has been destroyed and 100,000 acres of land laid waste by fires.

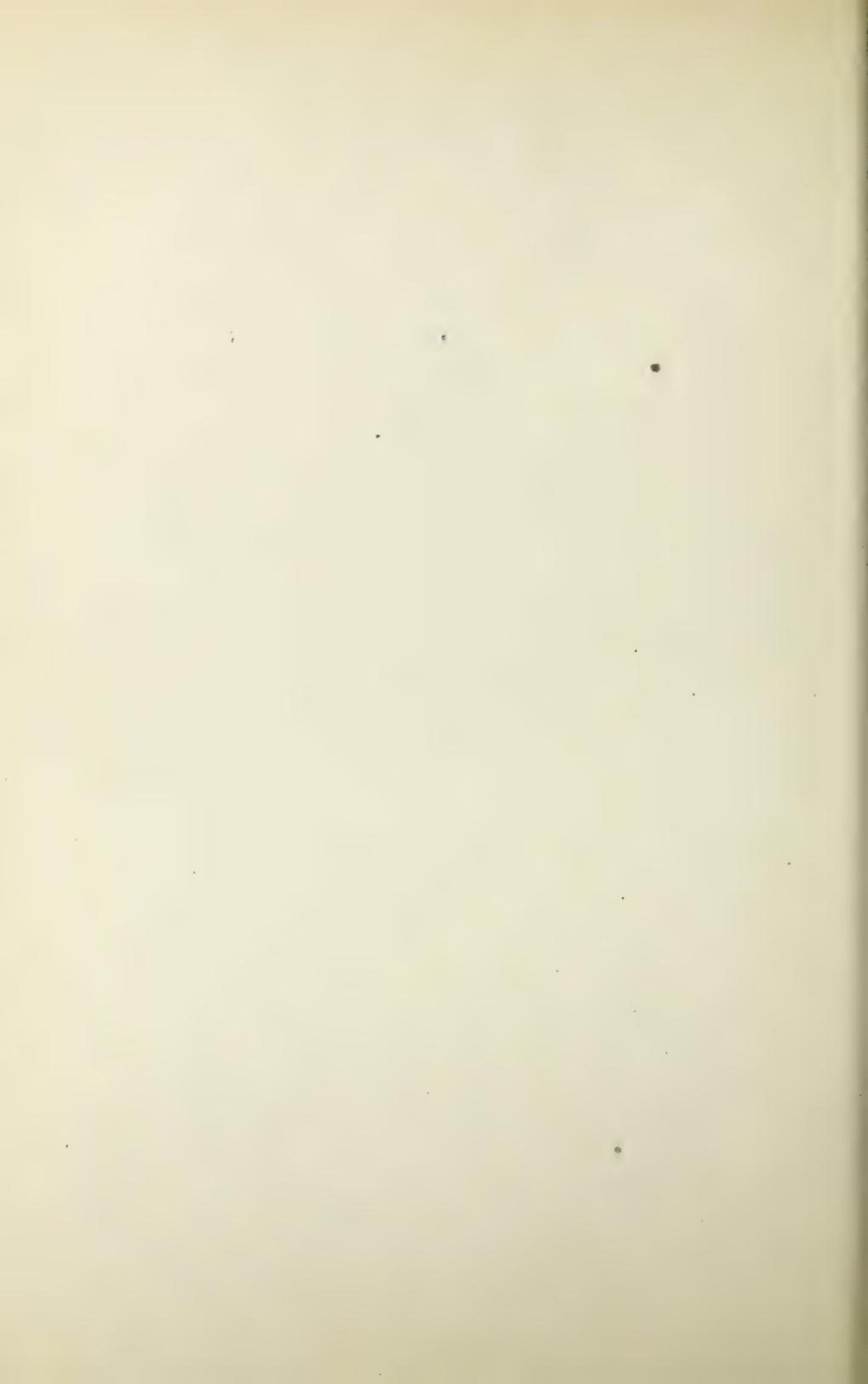
Unless this rate of destruction is stopped very soon there will be no woodland left in Massachusetts in a very few years. The further progress of modern forestry can never be successfully carried on until we stop this fire hazard.

In order to thoroughly protect our woodlands every town and city must co-operate with the State officials and Fitchburg should not be backward in doing her share. We were the last city in the State to establish the department and to report progress to the State Warden. Let it not be said of us that we are behind other cities in getting results under this new system.

The amount of money necessary to equip and maintain this department would be a variable sum, depending on the number of fires occurring during the year. Therefore, I would respectfully recommend for this department a separate appropriation which can be drawn from during the year for necessary expenses, the sum total of which to be replaced at the beginning of each year, thereby retaining the principal intact at all times.

Respectfully submitted,

WILLIAM W. COLTON,
Forest Warden.



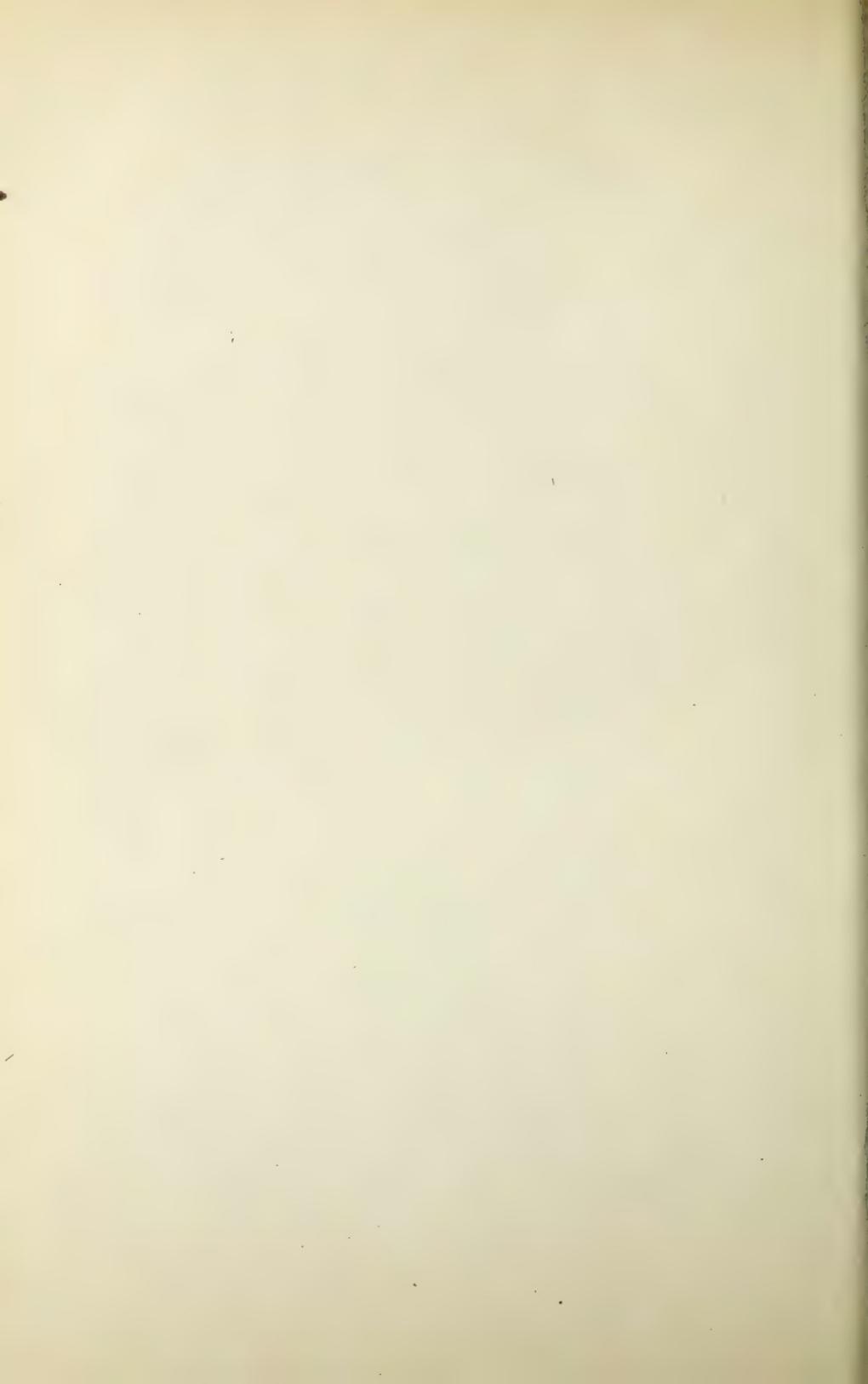
ANNUAL REPORT
OF THE
SUPERINTENDENT OF
PUBLIC BUILDINGS

OF THE
CITY OF FITCHBURG
MASSACHUSETTS

1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911



ANNUAL REPORT OF THE SUPERINTENDENT OF PUBLIC BUILDINGS

CITY HALL, FITCHBURG, Dec. 1, 1911.

To His Honor, the Mayor, and the City Council of the City of Fitchburg :—

GENTLEMEN :— In compliance with the City Ordinance, Section 4, Chapter 17, I have the honor to submit the following report of this department for the year ending Nov. 30, 1911 :—

Repair and care 1911, (as per

Auditor),	\$37,606 58
-----------	-------------

Credit by transfer of bills to other

departments,	104 93
--------------	--------

Total expenditure, repair and care,	\$37,501 65
-------------------------------------	-------------

Appropriation, repair and care,	\$31,000 00
---------------------------------	-------------

Receipts for rental of Assembly Hall,	983 25
---------------------------------------	--------

Sale of old furniture,	15 00
------------------------	-------

Sale of old settee,	4 00
---------------------	------

Received from county for Court House,	400 00
---------------------------------------	--------

Total receipts,	32,402 25
-----------------	-----------

Overdrawn,	\$5,099 40
------------	------------

Expended in the following manner :

School houses, twenty-two in use.

School janitors' salaries,	\$9,723 95
----------------------------	------------

Janitors' salaries, evening school,	309 83
-------------------------------------	--------

Fuel,	8,389 93
-------	----------

Janitors' supplies,	335 99
---------------------	--------

Repairs and furnishings on school

buildings,	9,992 43
------------	----------

\$28,752 13

Fire Stations, six in number.

Central Fire Station,	\$350 29
Hose 1, Summer street,	169 75
Hose 2, West Fitchburg,	154 37
Hose 3, Factory square,	96 98
Hose 4, Water street,	290 38
Hose 5, Oak Hill road,	403 13
	—————
	\$1,464 90

City Farm,	\$566 80
City stables, W. F.	40 37
City stables and sheds,	88 59
Central Police Station,	324 19
Police Station, W. F.	2 20
Subway,	12 91
Wallace way,	2 40
Wallace library,	195 14
Superintendent of Buildings office,	507 06
	—————
	\$1,739 66
City Hall,	5,544 96
Repair and care—Total expended,	—————
	\$37,501 65

CITY HALL EXPENDED.

DIVISION.

Expended,	\$5,545 96
Janitor service,	\$1,995 21
Lighting,	828 97
Fuel,	929 39
Cleaning,	479 26
Officer service,	38 50
Repairs on elevator,	66 82
Furnishings and supplies,	116 63
Renewal of insurance on elevator,	31 50
General repairs,	1,058 68
	—————
	\$5,544 96

City Hall repairs:

- Plumbing, tiling in comfort station, furniture repairs.
- Mason work, whitewashing basement.
- Hat rack for check room.

Total receipts for rental of Assembly Hall for 1911 was \$983.25. This amount would have been increased by \$192.50, but for free use of hall granted to parties by Committee on City Property.

**PRINCIPAL REPAIRS AND DIVISION OF FUEL AND
NIGHT JANITOR SERVICE OF SCHOOL
BUILDINGS.**

ASHBURNHAM STREET SCHOOLS, EAST AND WEST.

Steam heat plant. Two 4-room buildings. Fan ventilation.

Expended,		\$694 43
Fuel,	\$409 92	
Janitor service, evening school,	52 50	
Repairs,	232 01	
		\$694 43

Repairs :

Painting, plumbing, carpenter work.

CLARENDON STREET SCHOOL, NORTH AND SOUTH.

Steam heat plant. Two 4-room buildings. One fan ventilation. One gravity.

Expended,		\$1,755 53
Janitor service, evening school,	\$54 75	
Fuel,	705 72	
Repairs,	995 06	
		\$1,755 53

Repairs :

Retaining wall, concrete walks, painting,
Bubble fountain, carpenter work.

DAY STREET SCHOOL.

Ten-room building. Fan ventilation. Steam heat plant.

Expended,		\$1,116 02
Fuel,	\$491 72	
Repairs,	624 30	
		\$1,116 02

Repairs :

Steel ceilings, boiler repairs, painting, roof repairs.
Snow guards, cement platform, stools, new lavatory.

DEAN HILL SCHOOL.

Stove. Window ventilation. One room.

Expended, repairs,	\$165 98
Steel ceiling, plastering walls.	
Painting, carpenter work.	

EAST STREET SCHOOL.

Steam heat plant. 4-room building. Fan ventilation.

Expended,	\$361 00
Fuel,	\$220 43
Repairs,	140 57

	\$361 00

Repairs :

On Bubble fountains.
Cement walk, bulletin boards.

GOODRICH STREET SCHOOL.

Steam heat plant. 8-room building. Fan ventilation.

Expended,	\$1,317 35
Fuel,	\$587 78
Repairs,	729 57

	\$1,317 35

Repairs :

Book cases, pump, plumbing, bubble fountains.
Painting, carpenter work.

ACADEMY STREET SCHOOL.

Academy Street School, 14-room building.

High Street School. 8-room building.

Steam heat plant. Fan ventilation.

Expended,	\$2,477 28
Janitor service evening school,	\$60 08
Fuel,	1,748 64
Repairs,	668 56

	\$2,477 28

Repairs:

Cement walk, plastering, painting.
 Carpenter work, plumbing.
 Furniture.

HOSMER SCHOOL.

Steam heat plant. 8-room building. Fan ventilation.

Expended,		\$1,435 08
Fuel,	\$620 86	
Repairs,	814 22	
	_____	\$1,435 08

Repairs:

Storm porches, furniture, electric work.
 Plumbing, boiler grates, new shade trees.

HIGHLAND AVENUE SCHOOL.

Hot air plant. Gravity. 2-room building.

Expended,		\$277 10
Fuel,	\$133 40	
Repairs,	143 70	
	_____	\$277 10

Repairs:

Plastering and whitening, varnishing.
 Bubble fountains, furnace repairs.

NEW HIGH SCHOOL.

Steam heat plant. Fan ventilation. 30-room building.

Expended,		\$3,852 94
Fuel,	\$1,283 30	
Janitor evening service,	23 25	
Repairs,	2,546 39	
	_____	\$3,852 94

Repairs:

Changing, for industrial department.
 Roof windows, boiler repairs.
 Painting, plumbing, changing water supply system.
 New damper regulator.

LAUREL STREET SCHOOL.

Hot air plant. Gravity. 6-room building.

Expended,		\$1,269 35
Fuel,	\$316 77	
Repairs,	952 58	
	_____	\$1,269 35

Repairs :

- New stairway, repairs to slate roof and valleys.
 Painting ceilings, walls and desks.
 Bubble fountains, new shades.
 Mason work, plumbing, tar concrete walks.

MAVERICK STREET SCHOOL.

Hot air plant. Gravity. 2-room building.

Expended,		\$596 92
Fuel,	\$178 07	
Repairs,	418 85	
	_____	\$596 92

Repairs :

- Bubble fountains, new desks, painting.
 Plumbing, carpenter work, cement walk.
 Furnace repairs.

PEARL HILL SCHOOL.

Stove. Window ventilation. 1-room building.

Expend,		\$90 60
Fuel,	\$27 00	
Repairs,	63 60	
	_____	\$90 60

Repairs :

- Painting, carpenter work, repairs on brick wall.

ROLLSTONE STREET SCHOOL.

Hot air plant. Gravity. 4-room building.

Expended,		\$250 97
Fuel,	\$89 35	
Repairs,	161 62	
	_____	\$250 97

Repairs:

Furnace repairs, tar walk, roof repairs.
Plumbing, painting, carpenter work.

SCHOOL STREET SCHOOL.

Steam heat plant. Fan ventilation. 4-room building.

Expended,	\$710 64
Fuel,	\$365 88
Repairs,	344 76

	\$710 64

Repairs:

Pointing brick walls, electric wiring.
Painting, tar walks.

SOUTH FITCHBURG SCHOOL.

Steam heat plant. Gravity. 8-room building.

Expended,	\$1,087 36
Janitor service evening school,	\$44 25
Fuel,	619 64
Repairs,	423 47

	\$1,087 36

Repairs:

Painting, bubble fountains, electric work.
Carpenter work, boiler repairs.

SALEM STREET SCHOOL.

Steam heat plant. Fan ventilation. 4 rooms.

Expended,	\$1,017 17
Janitor service evening school,	\$45 00
Fuel,	514 72
Repairs,	457 45

	\$1,017 17

Repairs:

Plumbing, boiler grate, carpenter work.
Window guards, tar walk, kindergarten chairs.

WOODBURY SCHOOL.

Stove. Window ventilation. 1 room.

Expended,		\$99 39
Fuel,	\$34 50	
Repairs,	64 89	

		\$99 39

Repairs:

Stove repairs, new coal bin.

Replacing desks, carpenter work.

WACHUSETT SCHOOL.

Stove. Window ventilation. 2 rooms.

Expended,		\$53 85
Fuel,	\$9 00	
Repairs,	44 85	

		\$53 58

Repairs:

Plastering, painting, carpenter work, stove repairs.

PLEASANT STREET GREEN HOUSE.

Expended,		\$63 23
Extra janitor service,	\$30 00	
Fuel,	33 23	

		\$63 23

TABLE

Showing the location, size and value of the schoolhouse lots belonging to the city of Fitchburg, used by the School Department, value of buildings and condition:

Location	When Erected	Material	Stories	Number of Sch. Rooms	Condition	Estimated Value	Size of lot, square feet	Amount	Total Value of Houses and Lots
Ashburnham		Brick	2	4	Good	\$24,000	61,677	\$10,080	\$34,080
Ashburnham New	1890	Brick	2	4	Good				
Clarendon.....	1887	Brick	2	4	Fair	28,000	22,050	4,400	32,400
Clarendon New.....	1893	Brick	2	4	Good				
Day Street.....	1847	Brick	2	10	Fair	42,000	31,644	16,009	58,000
Dean Hill.....		Wood	1	1	Fair	250	12,512	50	300
East Street.....	1903	Brick	2	4	Good	20,612	26,235	5,000	25,612
Goodrich Street.....	1891	Brick	2	8	Good	24,500	40,000	2,000	26,500
Highland Avenue.....	1885	Brick	2	2	Good	6,000	12,200	2,000	8,000
High St. Grammar.....		Brick	2	8	Good	35,576	30,976	12,350	47,926
Hosmer.....	1906	Brick	2	8	Good	39,962	33,073	7,500	47,462
Laurel Street.....	1893	Brick	2	6	Good	15,000			15,000
Maverick Street.....	1885	Brick	2	2	Good	6,000	15,600	2,000	8,000
New High.....	1895	Brick	2	25	Good	175,000	50,089	25,500	200,500
Old High.....	1869	Brick	2	14	Fair	52,000	24,863	14,500	67,250
Pearl Hill.....		Brick	1	1	Good	1,500	12,000	300	1,800
Rollstone Street.....	1884	Brick	2	4	Good	12,000	68,424	10,000	22,000
School Street.....		Brick	2	4	Good	20,000	10,570	6,000	26,000
South Fitchburg.....		Brick	2	8	Good	20,000	44,060	3,500	23,500
Salem Street.....	1902	Brick	2	4	Good	20,000	28,611	2,500	22,500
Woodbury.....	1872	Brick	1	1	Good	2,500	51,352	300	2,800
Wachusetts.....		Brick	2	2	Fair	3,500	27,000	1,000	4,000
Kimball.....		Brick	1	1	Poor	50	9,625	50	100
Rockville Dist. 8.....		Brick	2	2	Poor	50	14,000	1,000	700
						\$548,750		\$125,530	\$674,480

TABLE

Showing the location, size and value of Fire Stations belonging to the city of Fitchburg, used by the Fire Department:

Location	When Erected	Material	Stories	Condition	Estimated Value	Size of lot, square feet	Amount	Total Value of Houses and Lots
Central Station.....	1893	Brick	2	Good	\$21,800	7,345	\$5,100	\$26,900
West Fitchburg.....	1869	Brick	2	Good	8,500	10,000	1,000	9,500
Hose 3.....		Wood	2	Good	1,000	Leased land		
Summer Street.....	1893	Brick	2	Good	13,000	5,926	3,700	16,700
Water Street.....	1897	Brick	2	Good	7,000	4,500	2,000	9,000
Oak Hill Station.....	1900	Brick	2	Good	14,125	6,918	1,800	15,920
					\$65,425		\$13,500	\$79,025

OTHER PROPERTY.

Location	When Erected	Material	Stories	Condition	Estimated Value	Size of Lots, square feet	Amount	Total Value of Houses and Lots
Wallace Library.....	1884	Brick	2	Good	\$70,000	12,086	\$27,200	\$97,200
City Farm.....		B & W	2	Fair	19,250		20,500	39,750
Clocks and Bells.....								1,000
River Street Lot.....							2,080	2,080
Central Police Station.....	1895	Brick	2	Good	38,000	31½ acres	5,000	43,600
W. F. Police Station.....	1882	Brick	1	Good			2,400	3,900
Taylor Farm.....	1901				1,500		6,000	13,550
City Barn.....		Brick	2	Good	7,550	2,998	1,000	2,000
City Barn, W. F.....		Brick	2	Good	1,000	10,000		
City Hall.....	1852	Brick	2	Good	20,000	14,516	40,000	90,000
					\$167,300		\$104,180	\$293,086

TOTAL VALUATION OF BUILDINGS AND LAND.

School buildings,	\$674,480
Fire stations and land,	79,025
Other buildings and land,	293,086
	<u>\$1,046,591</u>

PRINCIPAL REPAIRS ON FIRE STATIONS.

CENTRAL FIRE STATION.

5-run building.

Expended, repairs only,	\$350 29
Plumbing, painting, glazing.	
Horse stall repairs.	
Carpenter work.	
Extinguishers.	

HOSE 1 — SUMMER STREET FIRE STATION.

2-run station.

Expended repairs only,	\$169 75
Carpenter work, plumbing.	
Electric work, new shades.	

HOSE 2 — WEST FITCHBURG FIRE STATION.

2-run station.

Expended,	\$96 98
Repairs on stalls.	
Ground rent.	

HOSE 4 — WATER STREET FIRE STATION.

1-run station.

Expended repairs only,	\$290 38
Tar walk, repairs on stalls.	
Plumbing, mason work.	

HOSE 5 — OAK HILL FIRE STATION.

2-run station.

Expended repairs only,	\$403 13
Painting, tar walk, new shades.	
New floor in barn, traps in stalls.	
Electric work.	

PRINCIPAL REPAIRS ON OTHER BUILDINGS.

CITY FARM.

Expended,	\$566 80
Repairs :	
Plumbing, mason work, new floors.	
Carpenter work ; new urinal.	
Boiler repairs ; electric work.	

CITY STABLES AND SHEDS.

Expended,	\$88 59
Repairs :	
Traps in stalls.	
Setting glass.	
Repairing gravel roof.	
Carpenter work.	

CITY STABLES, WEST FITCHBURG.

Expended,	\$40 37
Repairs on floors and stalls.	

CENTRAL POLICE STATION.

Expended,	\$324 19
Repairs :	
Mason work ; repairs on boiler.	
New floor in barn.	
Painting ; carpenter work.	
Electric work.	
Roof repairs.	

POLICE STATION, WEST FITCHBURG.

Expended,	\$2 20
Repairs : Plumbing.	

SUBWAY.

Expended,	\$12 91
Repairs :	
Ladder and locks.	
Repairs on lights.	

WALLACE WAY.

Expended,	\$2 40
Repairs on lights.	

PUBLIC LIBRARY.

Expended,	\$195 14
Repairs:	
Plumbing ; painting ; storm porches.	
Extinguishers.	

SUPERINTENDENT OF BUILDINGS OFFICE.

Expended,	\$507 06
Clerical work.	
Office supplies.	
Horse hire.	
Car fares.	
Sentinel Printing Co. (500 Building Code).	
Anemometer.	

INCIDENTALS.

Diebold Safe and Lock Co., (For Central Fire Department),	\$79 53
Charles F. Wilson, (Insurance on twenty-two boilers in public buildings),	327 80
Otis Elevator Co., (Elevator in- spection),	55 73
	<hr/>
	\$463 06

TOTAL DISBURSEMENTS

For year 1911.

Repair and care (as per Auditor),	\$37,606 58
Credit by transfer of bills to other departments,	104 93
	<hr/>
Repair and care total expenditure,	\$37,501 65
Incidentals,	463 06
	<hr/>
	\$37,964 71

INSPECTION OF BUILDINGS.

During the year 1911, the total number of applications taken out to build and alter was 289, an increase of 33 over that of last year. Most of these buildings are already erected, and the remainder in process of erection are receiving close attention, in order that the building laws of this city will be complied with in every way.

PERMITS TO BUILD GRANTED, 1911.

	No. of Permits	Cost of Building
Wooden buildings, including veneered buildings,	155	\$410,856 00
Additions, alterations and repairs to wooden buildings,	111	92,544 00
Total for wooden buildings,	266	\$503,400 00
Brick buildings,	10	165,500 00
Brick alterations,	9	63,450 00
Stone buildings,	1	8,000 00
Cement buildings,	3	7,850 00
Grand total,	289	\$748,200 00
Wooden buildings—Ward 1,		26
2,		55
3,		14
4,		20
5,		10
6,		30
		155
Alterations wooden buildings—Ward 1,		21
2,		29
3,		13
4,		16
5,		10
6,		22
		111

Brick buildings—Ward 1,	3
2,	1
3,	0
4,	0
5,	3
6,	3
	—
	10
Brick alterations—Ward 1,	1
2,	2
3,	0
4,	4
5,	1
6,	1
	—
	9
Stone buildings—Ward 1,	0
2,	1
3,	0
4,	0
5,	0
6,	0
	—
	1
Cement buildings—Ward 1,	0
2,	0
3,	0
4,	1
5,	1
6,	1
	—
	3
Grand total permits—Wooden buildings,	155
Alterations—Wooden buildings,	111
Brick buildings,	10
Brick alterations,	9
Stone buildings,	1
Cement buildings,	3
	—
	289

INSPECTIONS REQUIRED UNDER SECTION 27,
CHAPTER 104, REVISED LAWS.

ELEVATORS.

I find on record that in the month of March, 1911, the late lamented Superintendent of Buildings, J. H. Kirby, in company with an expert elevator mechanic, inspected all elevators in the city, and found the same to be in a safe condition, and the owners living up to requirements.

There are in the city at the present time one hundred and twenty-five (125) elevators, fifteen (15) new ones being added this year.

INSPECTIONS REQUIRED UNDER SECTION 34,
CHAPTER 104, REVISED LAWS.

Accompanied by the Chief of Fire Department, all hotels and lodging houses were visited and found conditions good, and the evident intention of proprietors to conform to the law.

Respectfully submitted,
J. D. O'KEEFFE,
Superintendent Public Buildings.

THIRTY-NINTH
ANNUAL REPORT
OF THE
OVERSEERS OF THE POOR
OF THE
CITY OF FITCHBURG
MASSACHUSETTS

1911



FITCHBURG :
H. M. DOWNS PRINTING CO.
1912



POOR DEPARTMENT

BOARD OF OVERSEERS OF POOR.

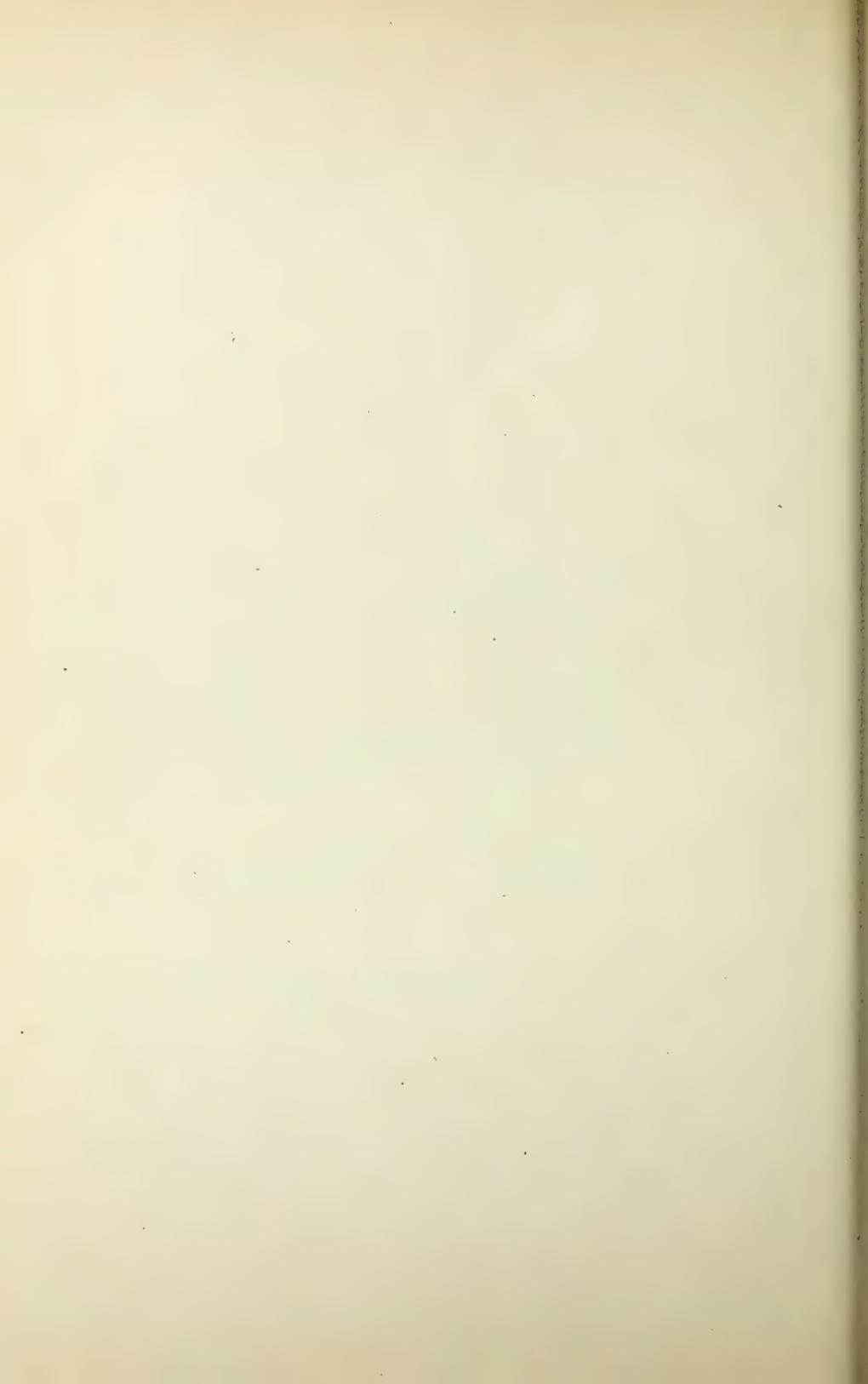
1911.

HON. M. FRED O'CONNELL, *Mayor and Chairman, ex-officio.*
WILLIAM P. ESPIE, *President Common Council, ex-officio.*

JOHN R. SMITH,	Term expires 1912
BENJAMIN A. COOK,	Term expires 1913
WILLARD L. HUMES,	Term expires 1914
ROBERT M. JONES, Clerk of Board.	
WILLARD L. HUMES, Acting Clerk.	

EZRA COLEMAN, Superintendent Almshouse.
MRS. EZRA COLEMAN, Matron Almshouse.

GEORGE P. NORTON, City Physician,
Residence, 24 Prichard Street.



REPORT OF OVERSEERS OF THE POOR

FITCHBURG, MASS., December 1, 1911.

To His Honor, the Mayor, and the City Council of the City of Fitchburg :

GENTLEMEN:—The Board of Overseers of the Poor respectfully submit this, their annual report, for the fiscal year ending November 30, 1911:

The favorable business conditions prevailing during the last two years and more, have continued during the year just closed and the following report shows that these favorable conditions have a direct effect upon the net results of this department, but the conditions named could not, and would not, have had the desired results except for the faithful and untiring work done by Mr. Willard L. Humes, (who again took up the duties of acting clerk) during the eleven months in which he performed the work of the office, by reason of the severe illness of the regular clerk, who was on December 6, 1910, attacked by a very critical return of the sickness that kept him away from the duties of the office for nearly six months during the earlier part of the year, this attack, and its attendant weakness, kept him out of the office until November 13, 1911.

During the month of April, 1911, Miss Minnie L. McGrail, who for ten years had been the very efficient assistant clerk, was on her request granted an indefinite leave of absence, and resigned her position in October, much to the regret of the members of the board and of the clerk. The vacancy occasioned by her leave of absence and resignation, was very acceptably filled by Miss Mabel L. Deane, who had formerly held the same position from June, 1899, to March 16, 1901.

OUTSIDE POOR.

The number of persons aided during the year was 508, representing 142 families, as follows: 68 families, consisting of 308 persons having settlement in Fitchburg; 33 families, con-

sisting of 79 persons having settlement in Fitchburg, aided in other towns and cities through the Overseers of the Poor of those places; 18 families, consisting of 51 persons residing here and having settlement in other cities and towns which refund amount of relief granted; 23 families, consisting of 70 persons having no settlement in the Commonwealth, and known as "State Cases."

This department has also furnished burials for 29 bodies. We have supported one person at the Massachusetts Hospital school, Canton; one at the Union Aid Home for Children, Fitchburg; two partially supported at St. Anne's Orphanage, Worcester. Fifteen persons have been sent to the State Infirmary at Tewksbury.

FINANCIAL STATEMENT.

RECEIPTS.

Appropriation,	\$17,000 00
From Commonwealth,	725 03
From towns and cities,	471 75
From miscellaneous sources,	216 06
From Superintendent of Almshouse,	963 69
Due from state, towns and cities,	293 67

	\$19,670 20

EXPENDITURES.

Amount expended for outside poor,	\$6,370 12
Amount expended for supply house,	2,174 78
Amount expended at almshouse,	8,919 02

	\$17,463 92
Unexpended balance,	\$2,206 28
Groceries on hand, \$346.95.	

ALMSHOUSE.

The expenditures at the Almshouse were \$8,919 02; the receipts, \$963.69; the net cost, \$7,955.33. Number of inmates at Almshouse Dec. 1, 1910, 41; admitted during the year, 14; discharged, 12; died, 10. The total number of inmates Dec. 1, 1911, 33. The average number of inmates for the year, 37; average cost per capita, \$4.13.

The thanks of the Board are hereby extended to the City Council for the installation of electric lights in the Almshouse, barn and other buildings during the year, thus reducing the danger from fires and giving a far better system of lighting than was ever in use before at the City Farm, and for the other needed improvements that have been made during the year.

The Board would again renew the recommendation that the proper and necessary steps be taken so that the name City Farm and Almshouse can be legally changed to the more modern and certainly pleasanter one of City Home. This name has been adopted by Worcester and other cities. Why should Fitchburg be in the background?

Mr. and Mrs. Ezra Coleman still remain in charge of this branch of the Poor Department and are faithful and earnest workers, well liked by all connected with the institution either as inmates or employees.

Our City Physician, Dr. George P. Norton, has during this, his second year of service, shown his undivided interest in everything pertaining to the welfare of the city and of those who have been placed under his care by this department.

The Assessors' valuation of the City Farm property Dec. 1, 1911, is as follows:

Real estate,	\$39,900 00
Personal property,	8,001 87
	————— \$47,901 87

Valuation Dec. 1, 1910 :

Real estate,	\$39,900 00
Personal property,	8,001 87
	————— \$47,901 87

Respectfully submitted,

M. FRED O'CONNELL,

Mayor, Ex-Officio, Chairman.

WILLIAM P. ESPIE,

President of Common Council.

WILLARD L. HUMES.

JOHN R. SMITH.

BENJAMIN A. COOK.

ROBERT M. JONES, *Clerk.*

THIRTY-NINTH
ANNUAL REPORT
OF THE
CITY PHYSICIAN
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911

REPORT OF CITY PHYSICIAN

FITCHBURG, MASS., Dec. 1, 1911.

To His Honor, the Mayor, and City Council:

GENTLEMEN:—I have the honor to submit herewith my report as City Physician, from Dec. 1, 1910, to Dec. 1, 1911:

	City Poor	Soldiers and Sailors	Police Dept.	Other Depts.
Total number of calls, 1,731.				
House visits,	740	130		
Office visits,	210	240		
City Farm calls,	170			
Police station calls,			102	
Calls made by order Board of Health,				58
Vaccination of school children,	72			
Obstetric cases,	3			
Examination by request of Chief,			4	
Examination by request of City Solicitor,				1
Examination by request of Supt. of Streets,				1

The work of the City Physician has been increased this year through the ruling of the City Solicitor, giving the Board of Health authority to call upon the City Physician to attend all contagious diseases among the poor, which has resulted in a great saving in expense to the city. In years past physicians attending such cases presented their bills to the Board of Health and received pay from the city. The early part of the year 1911 an epidemic of diphtheria cost the city nearly \$2,000 for services rendered by local physicians. The ruling of the City Solicitor places largely increased responsibility upon the City Physician, and should a severe epidemic of any contagious disease break out he would be obliged to devote practically all his time to the services of the Board of Health.

The bill for medical supplies for the year 1911 is as follows:

Poor department,	\$166 51
Soldiers and sailors,	184 20
	—————
	\$350 71

MEDICAL CASES ATTENDED.

Alcoholism,	59
Arterio-sclerosis,	2
Asthma,	5
Bronchitis, acute,	9
Bronchitis, chronic,	11
Cancer, breast,	1
Cerebral hemorrhage,	1
Cerebral softening,	2
Cirrhosis, liver,	1
Cystitis,	2
Diarrhoea, fermentive,	2
Dyspepsia, chronic,	14
Dyspepsia, acute,	2
Endocarditis,	5
Enterico-colitis,	1
Feeble-minded,	2
Grippe,	7
Insanity,	1
Impetigo Contagiosa,	4
Nephritis, chronic,	2
Lumbago,	4
Paralysis,	2
Pleurisy,	3
Pregnancy,	3
Purpura Gemorrhagica,	1
Rachitis,	2
Rheumatism, chronic,	4
Syphilis,	2
Tonsilitis,	3
Tuberculosis,	6
Urticaria,	1
Vaccination,	72
Valvular heart disease,	2

SURGICAL CASES ATTENDED.

Abscess, neck,	1
Abscess, leg,	1
Appendicitis,	1
Bruises, multiple,	14
Bullet wound, neck,	1
Fracture, humerus,	2
Fracture, rib,	4
Fracture, wrist,	1
Hemmoroids,	4
Hernia inguinal,	1
Incised wound, hand	1
Incised wound, neck,	1
Lacerated wound, face,	5
Scalp wound,	14

There were five deaths among the outside poor. Causes of death were—peritonitis, age 36; still born; diphtheria, age 2; tuberculosis, age 56; and acute dilatation heart, age 57. One soldier died of acute dilatation of the heart during my service.

There were seven patients sent to the Burbank Hospital, one to the Worcester Insane Hospital and one to the State Hospital at Westfield.

CITY FARM.

There are now at the City Farm 34 inmates, and during my service I have been called upon to attend 28 of them. There were seven deaths during the year due to the following causes: Cirrhosis liver, age 58; cancer breast, age 70; valvular disease heart, (2) 70 and 73; arterio sclerosis, (2) ages 87 and 91; tuberculosis, age 79.

The general health of the inmates of the Almshouse has been remarkable good considering their ages, and I believe their habits regarding food and sleep, combined with the care they receive, is an important factor concerning their long life, and a great deal of credit should be given Mr. and Mrs. Coleman for the interest they take in the care of these feeble old people.

POLICE DEPARTMENT.

The amount of service rendered the sick and injured in this department is large. The service includes any emergency case, from a simple abrasion to a broken spine.

My recommendation of last year, asking that an emergency cell be equipped with a firm mattress and rubber covering, has been complied with and there is now a suitable room to meet most any emergency. In fact the Police station, with an automobile ambulance in readiness, is answering many of the purposes of a Relief Hospital, and has rendered valuable assistance in accident and distress to many unfortunates.

In conclusion, I wish to extend my sincere thanks to the officials of all departments with which my work associates me, for their helpful co-operation.

Respectfully submitted,

GEORGE P. NORTON,

City Physician.

TWENTY-SECOND
ANNUAL REPORT
OF THE
BOARD OF HEALTH
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911

SALARIES.

Chairman,	\$300 00
Clerk,	50 00
Bacteriologist,	600 00
Inspector of Plumbing,	1,000 00
Inspector of Milk,	350 00
Agent,	1,200 00
Inspector of Meats and Provisions,	600 00
Stenographer,	780 00
School Physician,	450 00

REPORT OF THE BOARD OF HEALTH

To His Honor, the Mayor, and the Gentlemen of the City Council:—

In accordance with the Revised Laws, the annual report of the Board of Health, containing a statement, tabulated and otherwise, of the sanitary condition of the city and the business of the Board for the year ending December 31st, 1911, is herewith submitted, including those of the Agents of the Board, Milk Inspector, Bacteriologist, Inspector of Meats and Provisions, and Inspector of Slaughtering, and School Physician.

The Board organized February 8, 1911; Dr. Frederick H. Thompson was elected chairman, Mr. James Barr and Dr. Dwight S. Woodworth being the other members. Miss Theresa A. Shea was elected clerk. Mr. Frederick R. Houghton was re-elected Agent of the Board. Mr. John F. Bresnahan was re-elected Inspector of Plumbing and Inspector of Milk. Miss Theresa A. Shea was re-elected stenographer and clerical assistant. Dr. Atherton P. Mason was re-elected Bacteriologist, and Dr. Henry D. Clark was re-elected Inspector of Meats and Provisions.

During the year twenty-four regular and nine special meetings were held. The work of the Board in its different departments has been carried on in accordance with the same general plan as last year, details of which will be found in the reports of the various heads of the different departments. It was the purpose of the Board to make a thorough, general investigation of the housing conditions of the city, but an epidemic of diphtheria started in January, which caused an indefinite postponement of this much-needed inspection of dwellings and tenement houses. We hope to take up the work the coming year. The only other noteworthy event of the year was the taking up by the Board of the work of school inspection. This work properly belongs to the Health Department of

the city and will be more fully considered in its appropriate place.

In September, Mr. Frederick R. Houghton resigned his position to accept a promotion to a higher one, that of Visiting Agent for the State Board of Insanity, a position he is well qualified to fill, owing to his natural abilities and long experience as agent of *this* Board. We accepted his resignation with regret and desire to put on record our high appreciation of the long, intelligent, painstaking and successful service which he rendered this Board. There being no eligible Civil Service list from which to make an appointment, the Civil Service Commission gave us authority to make a temporary appointment to fill the vacancy. Mr. Arthur Belliveau, who had been employed as Assistant Agent during the diphtheria epidemic, was appointed Agent, and rendered faithful and efficient service until his successor, Mr. John D. Hassett, was appointed on January 2, 1912.

DISEASES DANGEROUS TO THE PUBLIC HEALTH.

This Board has adjudged that the diseases known as actinomycosis, anterior poliomyelitis, Asiatic cholera, cerebro-spinal meningitis, diphtheria, glanders, leprosy, malignant pustule, measles, ophthalmia neonatorum, scarlet fever, small-pox, tetanus, trachoma, trichinosis, tuberculosis, typhoid fever, typhus fever, varicella, whooping cough, and yellow fever, are infectious or contagious, and dangerous to the public health and safety within the meaning of the statutes. Physicians are required to report in writing, over their own signatures, immediately to the Board, every case of either of these diseases coming under their care, and postal cards conveniently printed and addressed, are supplied to them for this purpose. A notice by telephone, previous to the written notice, will be greatly appreciated. Superintendents of hospitals are required to report every case coming under their charge, and every physician must report cases coming under his care even though he may know they have already been reported by someone else. The law is plain. The Board wishes the hearty co-operation of all physicians in its effort to control contagious diseases, and will endeavor to make all rules for this control as plain and simple as possible,

reserving the right of judgment to decide what are proper, in view of the fact that no set of rules can be adopted that all will agree to be just and necessary.

CEREBRO-SPINAL MENINGITIS.

Four cases of cerebro-spinal meningitis were reported from April 18 to April 22, 1911; all were Greeks who landed in New York, having sailed from ports in Greece where this disease of a very fatal type was prevalent. Three died, and one recovered after an illness of four or five weeks. The first died in two days, the second in one day, the third in five days after the beginning of the illness. Not being able to get hospital accommodations at first for these cases, the last two were quarantined and cared for at the houses where they were taken sick.

ANTERIOR POLIOMYELITIS.

Only one case was reported during the year; this was not quarantined because it was not reported for several weeks after the beginning of the illness, and it was thought the danger of contagion had passed. There were ten cases reported in 1910, none in 1909 or 1908. Cards of warning are put up in cases of this disease and they are quarantined for three weeks. A diagnosis of this disease is difficult in its early stages. Suspicious cases should be reported so that they may be investigated by experts if necessary.

SCARLET FEVER.

48 cases of this disease were reported during the year, with one death. There were 77 cases in 1910, with one death; 90 cases in 1909, with four deaths.

MEASLES.

There were 31 cases of this disease reported, with no deaths. In 1910 there were 153 cases and no deaths; in 1909, 814 cases and five deaths.

WHOOPING COUGH AND CHICKEN POX.

There were 28 cases of whooping cough reported, with 11 deaths. Seventeen cases of chicken pox were reported, no deaths. Cases of these diseases are not quarantined, but since the mortality attending whooping cough is quite large, and since children having these diseases are excluded from the schools, it is important that these cases should be promptly reported in order that prompt notification may be sent. Physicians will do us a favor by promptly reporting these as well as other cases of contagious or infectious diseases.

OPHTHALMIA NEONATORUM.

There were four cases of this disease reported, with no deaths.

December 1, 1911, the State Board of Health for the fourth time in two years sent a circular regarding ophthalmia neonatorum to every registered physician in Massachusetts. This circular says, "there remains, however, much to be desired in the way of prompt notification of this disease and its proper management subsequent to notification." It also says, "in this connection the point is emphasized herewith that physicians, if they would properly protect themselves, must report their cases in the very earliest stages," and still further, "it would certainly seem that medical practitioners can have little cause for complaint if in the future their failure properly to notify this and other diseases, declared by the State Board of Health to be dangerous to the public health, is followed by prosecution." No flagrant violation of the law regarding ophthalmia neonatorum has come to our notice in Fitchburg; if such should occur the offender will be promptly brought into court.

When cases of this disease are reported to the local Board it will furnish a consulting specialist and a competent nurse to ensure prompt and proper treatment at their homes, provided they cannot be sent to the local hospital or the Massachusetts Eye and Ear Infirmary, and are in indigent circumstances. We believe it would be well for physicians, on the occasion of their final visits to maternity cases, to say to the mother and to

the nurse, "if the baby has sore eyes, no matter how mild, you had better send for me at once."

For the propylactic treatment of this disease a one per cent solution of nitrate of silver in convenient form, with directions for its use, will be furnished, free of expense, to every physician applying for it; a routine treatment with this remedy is advised in all suspicious cases, preferably in every case of the newly born.

SMALLPOX.

No cases of smallpox have occurred during the past year. The isolation hospital for smallpox has been renovated lately and is ready for the reception of patients.

TYPHOID FEVER.

Forty-three cases were reported, with three deaths. Thirty cases were treated at the Burbank Hospital, with no deaths. In 1910 there were 113 cases with 10 deaths; in 1909, 27 cases with three deaths. Nine of this year's cases occurred on the route of one milkman, between the dates of June 12th and 19th. The total number of cases reported during this week were 15. He was stopped peddling milk from June 19th to August 29th, until conditions at his bottling shed were made satisfactory to this Board. Widal tests were taken from his family and all the families at farms from which he obtained his milk. All were negative. While the source of contagion was not positively determined, it was believed that the water used in cleansing the milk cans came from a stream polluted by typhoid discharges from a farm 250 feet up the stream; a case of typhoid fever having occurred at this farm one year and a half previously. In one family of ten persons there were eight cases with no deaths. The primary infection in these cases may have come from the milk sold by the milkman above mentioned, but at least six of them came from contact infection, owing to lack of care and poor sanitary conditions. While there were more cases this year than in the year 1909 there seemed to be no common source of contagion except as above mentioned.

DIPHTHERIA.

During the early part of the year diphtheria became epidemic in this city, most marked in the thickly settled part of Ward 2 and the easterly part of Ward 3, requiring active measures and a large expenditure of money to quell it. The State Board of Health kindly advised us as to the proper measures to be employed, and their directions were followed during the epidemic. Cultures were taken from very many of the school children, and in some cases from entire schools, with a view of locating carrier cases. An isolation hospital was opened at the Burbank Hospital in the building which was at first used for a general hospital. This proved a great help in combating the disease. Carrier cases, as well as clinical cases, were quarantined for a time. During the year there have been found 205 clinical and 668 carrier cases of diphtheria, with 15 deaths. There are now 15 clinical and 2 carrier cases. There are nine houses under quarantine for clinical cases and one house is quarantined for a carrier case. While this number is not large we cannot be assured that it may not largely increase at any time unless we have at our disposal better means than we now have of dealing with contagious diseases. A review of the statistics of diphtheria in Fitchburg for the past 11 years shows that in 1900 there were 97 cases; 1901, 52 cases; 1902, 53 cases; 1903, 17 cases; 1904, 16 cases; 1905, 48 cases; 1906, 46 cases; 1907, 44 cases; 1908, 46 cases; 1909, 83 cases; 1910, 186 cases; 1911, 205 cases. In 1903 and 1904 there occurred the smallest number in 11 years, namely 17 and 16 respectively. This number increased to 48 in 1905, and remained practically stationary until 1909, when it became almost twice as many, namely 83 cases, and in 1910 and 1911 four times as many, or an average of 195, and almost twelve times as many as in 1904. There has been no account made of carrier cases until the past year when we found 668 carriers, that is, persons who have the germs in their noses or throats, but are not ill. During the epidemic all carrier cases were quarantined for a short time. Since that time carriers when found have been quarantined, until lately, when we have quarantined only carriers that are found among school children, releasing them as soon as one or in some cases two negative cultures have been obtained. We

believe that in persistent carrier cases the virulence of the germs should be tested by inoculating guinea pigs, in order to avoid quarantining them (the carriers) longer than is necessary. Clinical cases are quarantined until two negative cultures on successive days have been obtained, the last culture to be taken by the Board of Health.

There is great difficulty in separating the sick from the well in some families. In such cases we try to immunize the whole family. While our efforts to control diphtheria are meeting with a fair degree of success, and the mortality from the disease has fortunately been low, we are still in danger, and are convinced that owing to the difficulties of isolating the sick and keeping strict quarantine, as well as for economical reasons, an isolation hospital is an urgent necessity.

Moreover the law says we shall build and maintain one, and we are warranted in saying that if we do not build it voluntarily the State Board will very soon compel us to, as it has North Adams and other cities.

The total amount paid out for diphtheria during the past year is, as near as can be estimated, \$6,802.13, of which only \$1,312.30 was paid out of the Board of Health appropriation; \$3,090.10 of bills were grouped together under the heading Diphtheria Epidemic and paid with money transferred from the incidental account.

\$2400.00 was paid from the Burbank Hospital appropriation for the care and treatment of 33 patients sent to the isolation hospital, which was opened in the old Burbank Hospital building during the diphtheria epidemic. The number of deaths at the isolation hospital was five. The largest number in the hospital at any one time was twelve. The average cost per patient per week was \$29.12. There were four intubation cases with two deaths. One patient wore a tube for several weeks, and then had a tracheotomy done, and is still wearing a tracheotomy tube (seven months after the operation). A detailed account of expenditures for diphtheria paid out of the Board of Health appropriation will be found under the head of expenditures at the latter part of this report.

TUBERCULOSIS.

There were 81 cases reported, with 31 deaths. A mortality of 38.2 per cent. In 1910 there were 97 cases and 27 deaths; mortality, 27.8 per cent. In 1909 there were 83 cases with 23 deaths; mortality, 27.7 per cent. In 1908 there were 67 cases and 34 deaths; a mortality of 50.7 per cent. In 1907 there were 49 cases and 45 deaths; mortality of over 90 per cent.

It is impossible from these few figures to draw any positive conclusion as to mortality because no doubt there are still many cases that are not reported, but so far as it goes it shows that the mortality is diminishing. There have been 56 patients aided during the year. Of this number there were 4 at Tewksbury, 20 at Westfield, 1 at North Reading, 10 at Rutland, 3 on farms, 15 at homes, and 2 in other cities. One patient was aided at Burbank Hospital for tuberculosis of knee. The cost of aid extended to these patients was \$4,147.62; 45 cases were aided in 1901 at an expense of \$3,612.46; 20 cases were aided in 1909 at an expense of \$3,497.04; 5 cases were aided in 1908 at an expense of \$172.40. These figures show an increasing amount for the aid of tuberculous patients each year. The Society for the Control and Cure of Tuberculosis this year as in the past has rendered valuable assistance in visiting and giving advice to tuberculous patients under our care. They have also furnished milk, medicines, groceries and clothing for tuberculosis patients to the amount of \$155.69. The services of their tuberculosis nurse are always at our disposal for the asking. Miss Margaret E. Cartwright has fully sustained the enviable reputation for energy and efficiency of work established by her predecessor, Miss Annie B. Rose.

The greatest difficulty we have experienced in caring for tuberculous cases at State institutions is that we have no power compelling patients to remain any longer than they please. They soon become homesick and return to their homes and we are obliged to care for them here at an increased expense. Such cases would be best accommodated in a hospital in our own city near their own homes and friends. The policy of the State is to have each municipality take care of those tuberculosis patients that are public charges by means of two agencies, a tuberculosis dispensary and a tuberculosis hospital; the latter

to be grouped with buildings for an isolation hospital for other contagious diseases besides smallpox. In this tuberculosis hospital can be treated cases in all stages of the disease. The dispensary is the agency for the examination of suspected cases, for the treatment and supervision of cases who do not need hospital care or who have been discharged from hospitals as cured or arrested cases. It is also as a sort of an intelligence office for these latter cases to the end that they may be furnished with suitable work under conditions that will not favor a return of the disease; in short, a sort of clearing house for tuberculous cases.

ISOLATION HOSPITAL FOR CONTAGIOUS DISEASES INCLUDING TUBERCULOSIS.

We believe that an isolation hospital for contagious diseases should be built at once to accommodate 25 scarlet fever and diphtheria patients, and a tuberculosis hospital for at least 25 patients. These should be sufficiently near together to be heated and administered from the same central plant. This is the plan that Worcester is trying to get an appropriation for, and one that has been in operation in Somerville for some time. It is the plan advocated by the State Board of Health and the State Tuberculosis Commission. The city owns land connected with the Poor Farm, situated between the County Jail and the Poor Farm, that is admirably adapted to this purpose; it is highly situated and slopes gradually toward the south and east, and is conveniently accessible by means of the Fitchburg & Leominster Street Railway. This plant could be administered by a competent woman superintendent, assisted by graduate nurses, or senior nurses from various training schools for nurses in Massachusetts who wish the experience of nursing contagious diseases. The expense of such a group of buildings would be about \$50,000. Such institutions are by law under charge of the Board of Health and should be separated from general city hospitals. To obtain the gratuity of \$5 per week, which the State offers to every city or town which establishes and maintains a tuberculosis hospital, for each patient who is unable to pay for his support, or whose kindred bound by law to maintain him are unable to pay for the same, it is necessary to erect and maintain such an isolation hospital as I have

described, apart from any general hospital or private tuberculosis hospital, according to the opinion of the Attorney General, given Dec. 4, 1911. The plans for such a hospital must also be approved by the State Board of Health.

A city and adjoining towns may, with the consent of the State Board of Health, establish such hospitals in common, and the tuberculous patients of all such towns that are public charges may receive the gratuity of \$5 from the state provided tuberculosis germs are found in their sputa. This opinion was given to us by the Secretary of the Tuberculosis Commission. This decision allows us to establish and maintain an isolation hospital in common with Leominster and adjoining towns, if we desire. We have given you a detailed account of the cost of caring for tuberculous patients and of the large amount paid the past year for caring for diphtheria patients, and our opinion of the inadequacy of the means at our disposal for the control of the present situation, for the purpose of emphasizing the need of an isolation hospital for contagious diseases, including tuberculosis.

We wish in this connection to call your attention to the admirable report of our Bacteriologist, Dr. Atherton P. Mason, who unqualifiedly asserts that he believes such a hospital is necessary to control the epidemic of diphtheria which he believes is still prevailing.

SANITARY STATIONS.

Chapter 596, of the Acts of 1911, provides that in cities of over 10,000 inhabitants there shall be provided one or more sanitary stations for both sexes, which shall be established and maintained by the city or town in which they are located. The number and location of such sanitary stations shall be determined by the local Board of Health. The Board has considered this matter and believes that the station under City Hall is well located and properly kept. It also believes that another station should be established underground in the little park opposite the railroad station, and the City Government will be required to built and equip one in this place unless we can be convinced that some other location is more desirable. If changes to the approach to the railroad station are to be made, as outlined in

articles that have appeared lately in the public press, this sanitary station could be located so as to conform to the general plan for such changes and be established when they are carried out.

OFFAL, ASHES, HOUSE DIRT AND RUBBISH.

The regulations of the Board of Health require the owner, agent or lessee of every building within the limits of the city to provide a suitable receptacle for ashes and rubbish and not to allow ashes or rubbish to be thrown in or about the yard or premises. They also require that every house shall be provided with a suitable, water tight, covered receptacle in which to keep garbage and swill. The collection of the garbage and swill is under the jurisdiction of the Board of Health and a five-year contract for such collection, covering the whole city was made with Russell K. Proctor, November 21, 1911, for the sum of \$3,300 per year. This collection is made by him twice a week and is generally well done. No others are permitted to collect swill without permission from the Board of Health. Only one person has this permission. It is the policy of the Board not to grant licenses to private parties, as they are hard to control.

It is the duty of the Street Commission to collect ashes, house dirt and rubbish. The collection of ashes is well done every two weeks; a more frequent collection during the cold weather would be better. The collection of house dirt and rubbish is very unsatisfactory as it is made only twice a year. If collections were made every two months it would be an inducement for householders to provide proper receptacles and keep their premises free from rubbish and dirt. We urge your honorable body to pass an order requiring a collection of house dirt and rubbish to be made every two months. The Board of Health gets the blame which should be placed on the Street Commission where it belongs. We have no power to interfere until a nuisance exists. We have had rubbish signs printed in four different languages and shall try to prevent dumping of rubbish in improper places, as far as possible. The public dump is properly kept under the direction of Mrs. Noah Jackson, and parties are urged to make use of the same. The Board pleads guilty to a part of the blame laid at its door for the dirty

conditions of back yards and the unsanitary housing conditions in certain parts of the city. An effort will soon be made to take up a thorough sanitary inspection of the city and thereafter to make regular sanitary inspections and keep proper records of the same.

INSPECTION OF MEATS AND PROVISIONS.

May 6, 1911, a regulation concerning the exposure of food-stuffs was adopted, making it obligatory to protect them from dirt, flies, animals, and other contaminating substances and the Inspector was directed to enforce it. Our zeal was later somewhat impaired by a decision of the courts that the law was unconstitutional. The Inspector of Meats and Provisions, Henry D. Clark, D. V. S., was in June named Inspector of Slaughtering in accordance with Chapter 534, Acts of 1911, and has performed his duties to our satisfaction.

INSPECTION OF MILK AND PLUMBING.

For the details of work of these departments you are referred to the report of Mr. John F. Bresnahan, Inspector of Milk and Plumbing. As regards milk inspection the quality of the work done meets the approval of the Board, but the quantity has been limited owing to the fact that the Milk Inspector has not the time to devote to the work that its proper performance requires. All farms should be inspected twice a year and more time spent in testing the cleanliness and quality of milk. The Inspector should devote his whole time to the duties and should be paid a commensurate salary. We believe however, that the milk supply of Fitchburg will compare favorably with that of other cities and that this is due in great measure to the efficient work done in this department. We have not felt justified in spending a large amount for milk inspection, while the policy of the state regarding the matter is in its present unsettled state, but believe the work done has been done in the right way and has accomplished much towards obtaining a clean milk supply for Fitchburg and towards diminishing the infant mortality of our city. The price paid the producer by the consumer, however, has much to do with the problem of cleaner milk. When the consumer is willing to pay more he will get a

better milk. Much could be done to diminish the infant mortality of our city by the employment of a district nurse and by the issue of a pamphlet to mothers regarding the care of milk after it is received in proper condition from the milkman and also regarding the care and feeding of the infant during the hot months. If births of infants were reported immediately and mothers were looked up and advised as suggested above, infant mortality during the first few months of infantile life would be materially lessened.* The Board of Health will willingly co-operate with charitable persons or societies to carry out a plan of this sort if your honorable body is not willing to make an appropriation for this purpose.

TEMPORARY CARE OF PERSONS SUFFERING FROM MENTAL DERANGEMENT.

Chapters 394 and 395 of the Acts of 1911, provide that persons requiring public assistance who are suffering from insanity, mental derangement, delirium, except delirium tremens and drunkenness, placed or detained in a lockup, police station, city prison, house of detention, jail or other penal institutions, may be detained for twelve hours, but must be forthwith examined by a physician and furnished suitable medical care and nursing. During this time such persons must be sent to some public or private hospital or provided for in some way. If this cannot be done during the twelve hours, they must be turned over to the Board of Health, who must provide for their admission to a state hospital and for their care temporarily if necessary at a general hospital, or in some private family. Boards of Health may make an agreement with municipal authorities to take care of all cases so placed or detained, but as any physician, police officer of city or town, or member of the district police may at once apply to a state hospital and send them there, provided it is done within twelve hours, it seems to us that the simpler way is the better way, and that Boards of Health should have the care of those only who cannot be sent away within twelve hours.

The chairman of the Board of Health has taken charge of four persons under this law and sent them temporarily to the Worcester State Hospital, entailing an expense of \$24, which

*Since this was written a law has been passed requiring births to be reported within 48 hours.

has been paid out of the county treasury. Some defects have been found in this law which will no doubt be remedied at the coming session of the Legislature.

MEDICAL INSPECTION OF SCHOOLS.

May 1, 1911, the medical inspection of schools was assumed by the Board of Health. Medical inspection of schools was first taken up by the School Committee in 1906; two school physicians were appointed for the examination of all school children referred to them by teachers for diseases and defects other than those of the eye and ear, and for the examination of working children between the ages of fourteen and sixteen. The examination for defects of sight and hearing were made by teachers as provided in the law. A perusal of the yearly reports of the school physicians shows that very commendable work has been done and that a good beginning has been made in school inspection, but no comprehensive plan has yet been adopted whereby the full effects and intents of the school inspection laws shall be realized. What is the aim of school inspection? To ascertain by physical examination the physical condition of each pupil entering school, together with his defects of vision, hearing, teeth, of development, etc., to make a record of the same, to advise the parent or guardian of the remedial treatment that should be adopted to perfect his physical condition, and finally to endeavor to see as far as possible that this treatment is carried out, and thereafter to make a yearly examination of the pupil before he enters the next grade. It is not necessary to try to show the importance of this work. Public opinion realizes its importance and will support you in appropriating whatever sums of money are necessary to accomplish it. Although the law of 1908 provides that school committees and boards of health are not to be limited by appropriations of municipalities in carrying out the provisions of the law regarding school inspection, we much prefer that your honorable body make a sufficient appropriation for this work.

This inspection to be complete should include all schools, public, parochial and private. There are in round numbers 6,800 pupils enrolled in these schools; it is believed that at least four school physicians would be necessary to do this work, allowing 1,700 pupils to each physician. Eventually a daily

inspection of every school in the city will be required; this means about an average of two hours each day for the inspector besides additional time for keeping records, etc. School physicians are classified under the civil service, and a requisition has already been made for an eligible list from which three or four may be appointed. At first a regular bi-weekly examination will probably be made when the new physicians shall have been appointed and additional visits when necessary. To supplement the work of school physicians it has been found that school nurses are necessary, whose work shall be to visit the parents and guardians, to explain to them the nature of the diseases and defects from which pupils suffer, and to try to induce them to carry out the recommendations of the school physicians; to see that they consult their family physicians if they are able to pay them, or to guide them to some hospital or dispensary where they can get free treatment, if they are unable to pay. It has been found by actual experience that unless this plan is adopted very many parents neglect to carry out the recommendations of the school physician. Dr. Frederick H. Thompson, Jr., the present school physician, has for a long time advocated the employment of a school nurse. A committee from the Woman's Club, in conference with teachers of the public schools, sent a letter to the School Committee April 25, 1910, urging more complete medical inspection of schools and the employment of a school nurse. The Board of Health strongly endorses these recommendations and asks your honorable body to make an appropriation sufficient to enable it to employ four school physicians and a school nurse. The examination of all school children for defective teeth has been made possible through the liberality and public spiritedness of the Grammar School Athletic League, in co-operation with the dentists of Fitchburg. This work is more than half done, and to this league and to the dentists of Fitchburg belongs the credit of inaugurating the first comprehensive and systematic inspection for defects other than those of vision and hearing of school children of Fitchburg. We desire here to place on record our appreciation of and thanks for their free service in this work for the public welfare.

Dr. Frederick H. Thompson, Jr., was appointed school physician, by the Board of Health, last June, and has done the

work formerly performed by the two school physicians appointed by the School Committee along the same general lines as has been followed since school inspection was first taken up in this city. His report is as follows:

REPORTS OF SCHOOL PHYSICIAN.

To the Board of Health of Fitchburg, Mass.:

The report of the School Physician of division No. 2 for the school year 1910-1911 is as follows:

Number of visits made from September, 1910, to June, 1911, 235

Day street,	23
Edgerly,	20
Practical Arts,	18
Highland avenue,	11
Lunenburg street,	29
Goodrich school,	21
Maverick street,	9
South Fitchburg,	15
Salem street,	16
Hosmer,	18
Laurel street,	22
Rollstone street,	24
Pleasant street,	2
High school,	1
School street,	2
Academy street,	2
Ashburnham street,	1
St. Joseph's (Parochial),	1
	235
Pupils examined,	1,242
Pupils advised,	506
Pupils excluded,	132
Pupils not advised nor excluded, including all negative cases,	604

Summary of cases referred to the School Physician:

Negative examinations for cultures,	508
Cultures for diphtheria,	172
Negative examinations,	96
Enlarged tonsils with adenoids,	66
Impetigo contagiosa,	65
Pediculosis,	51
Adenoids,	46
Defective teeth,	40
Unvaccinated cases,	24
Enlarged tonsils,	21
Pharyngitis (colds),	14
Tonsillitis,	9
Eye strain,	8
Malaise,	7
Defective hearing (worst cases),	6
Scabies,	6
Internal Strabismus,	5
Nervousness,	5
Septic wounds of hand,	5
Conjunctivitis,	4
Diphtheritic sore throats,	4
Dermatitis,	4
Mentally deficient,	4
Otitis media catarrhalis,	4
Septic wounds of foot,	4
Defective sight (severe),	4
Whooping cough,	4
Septic wounds of finger,	3
Seborrhœic eczema,	3
Choreiform movements,	2
Curvature of spine,	2
Chicken pox,	2
Enlarged cervical glands,	2
Epilepsy,	2
Granulating wounds,	2
Goitre,	2
Heart disease,	2
Herpes simplex,	2

Iritis,	2
Irritable bladder,	2
Ivy poisoning,	2
Stye,	2
Alveolar abscess,	1
Bruise of hand,	1
Bruise of face,	1
Alopecia,	1
Bow legs,	1
Congenital dislocation hip,	1
Suppurating gland of neck,	1
Eczema of scalp,	1
Eczema of hands,	1
Furunculosis,	1
Frost bite,	1
Granular conjunctivitis,	1
Congenital hip disease,	1
Incised wounds of head,	1
Incised wounds of hand,	1
Nasal hemorrhage,	1
Refused examination,	1
Rhinitis,	1
Suppurating wound of neck,	1
Suppurating wound of knee,	1
Sprain of wrist,	1
Urticaria,	1
Wen of hand,	1
Multiple warts,	1
 Total,	 1242

The past year has had the usual run of parasitic skin diseases. The greatest number of the pupils referred to the physician have had physical defects or abnormal conditions of the nose and throat.

In the latter part of January, owing to the prevalence of diphtheria and diphtheritic sore throats in the Cleghorn district among pupils attending the parochial schools, and because of the appearance of cases in the Lunenburg street school district, the Board of Health asked for the co-operation of the school

physicians in detecting cases among the pupils of the public schools of these districts. This work was done as recommended and four positive cases were found. The committee on school houses and hygiene voted the school physicians an assistant to carry on the systematic examinations of all school children in the other schools of their districts. It was further ordered that there be daily inspection made at the Lunenburg street school.

Out of 684 examinations made at the Lunenburg street, Goodrich street and Edgerly schools, 172 cultures from sore throats were taken and four were found positive. Two positive cultures were obtained from the Laurel street school.

The services of a school nurse are needed to follow up cases in the homes of children advised or excluded from school. By the co-operation of a nurse with the teachers and the school physician it will be possible to shorten the exclusion period in many of the diseases due to the lack of personal hygiene, and in other cases to hasten the time when the physical defects of the child will be given proper medical attention and the defects remedied. The nurse will educate the parent on matters of common sense hygiene and thereby help to stamp out many of the prevailing parasitic skin diseases that are due to poor hygienic surroundings and which form a large percentage of absences from school.

Since May, 1911, when the Board of Health assumed the duties, the work of medical inspection has been under the direction of this Board with one school physician.

Respectfully submitted,

FREDERICK H. THOMPSON, JR., M. D.,
School Physician.

Sept. 5, 1911.

To the Chairman of the Board of Health:—

The report of the School Physician for the months of September, October, November and December, 1911, is given in detail, viz :

Total visits to schools, 154, as follows :—

	Sept.	Oct.	Nov.	Dec.	Totals by Schools
Ashburnham street,	2	1	1	2	6
Academy street,	3	5	4	4	16
Clarendon street,	2	2	1	2	7
Day street,	7	5	4	1	17
Dean Hill,	0	0	1	0	1
Edgerly,	2	3	0	1	6
Goodrich street,	2	3	1	1	7
Highland avenue,	2	2	0	1	5
Hosmer,	2	4	2	2	10
High,	0	0	1	0	1
Lunenburg street,	3	4	3	2	12
Laurel street,	2	4	3	3	12
Maverick street,	2	1	0	0	3
Nolan,	1	1	1	2	5
Practical Arts,	2	2	0	1	5
Pleasant street,	3	1	4	2	10
Pearl Hill,	0	1	0	0	1
Rollstone street,	2	4	5	3	14
South Fitchburg,	1	3	1	2	7
School street,	2	2	1	2	7
Wachusett,	0	0	1	0	1
Woodbury,	0	0	1	0	1
 Totals by months,	 40	 48	 35	 31	 154
Total number of pupils examined,					735
Pupils excluded,				115	
Pupils advised,				162	
Pupils not advised, nor excluded,				160	
					437
Cultures for diphtheritic throats taken,				74	
Throat examinations, no cultures taken,				182	
					256
Throat examinations for scarlet fever,				42	
 Total,	 				735

Pupils were referred to the School Physician for the following diseases and physical defects:

Pediculosis,	67
Adenoids,	38
Impetigo contagiosa,	37
Adenoids and enlarged tonsils,	24
Enlarged tonsils,	9
Unvaccinated,	8
Eye strain,	7
Internal strabismus,	7
Pharyngitis (colds),	7
Scabies,	7
Conjunctivitis,	4
Herpes simplex,	4
Septic wounds,	4
Seborrhœic eczema,	4
Laryngitis,	3
Mal-nutrition,	3
Nervousness,	3
Otitis media suppurativa,	3
Tonsillitis,	3
Acute bronchitis,	2
Cervical adenitis,	2
Defective speech,	2
Dermatitis,	2
Furunculosis,	2
Indigestion,	2
Paronychia,	2
Stye,	2
Burn of face,	1
Bruise of hand,	1
Congenital dislocation of hip,	1
Chicken pox,	1
Defective sight (severe),	1
Defective hearing (bad),	1
Eczema,	1
Foreign body in eye,	1
Granulating wound,	1
Iritis,	1
Rhinitis,	1
Seborrhœa of scalp,	1
Tubercular ankylosed spine,	1

Pulmonary tuberculosis,	1
Tubercular adenitis,	1
Teneo-synovitis,	1
Ulcerated tooth,	1
Verruca,	1
Total,	276
Breaking quarantine,	1
Total,	277

Respectfully submitted,
 FREDERICK H. THOMPSON, JR., M. D.,
School Physician.

Jan. 1, 1912.

To the Board of Health, Dr. F. H. Thompson, Chairman:

In accordance with Chapter 514 of the Acts of 1909, the medical inspection of working children between the ages of 14 and 16 for health certificates was begun in August, 1910.

The report for the year, August, 1910, to August 1, 1911, is as follows:

Number of minors examined,	333
Number of minors failed,	5

The number who failed, three girls and two boys, were refused certificates for the following reasons:

1910. Dec. 19 — Evelina Brenconnier, 611 West Main street.

Diagnosis: Cachexia, incipient pulmonary tuberculosis.

Dec. 30 — Annie Desgrosseiliers, 38 Berry street.

Diagnosis: Curvature of spine. Under treatment with apparatus.

1911. Jan. 30 — Harry M. Lowe, 578 Main street.

Diagnosis: Epilepsy.

Feb. 24 — Fannie Malk, 5 Johnson street.

Diagnosis: Cachexia, pulmonary tuberculosis.

Has been under observation at the tuberculosis clinic.

1911. July 24—Thomas Moriarty, 103 Pratt road.

Diagnosis: Valvular heart disease.

Respectfully submitted,

FREDERICK H. THOMPSON, JR., M. D.,
School Physician.

Dec. 14, 1911.

HOUSE INSPECTIONS.

The total number of inspections for the year was 53. Thirty or 56 per cent. of the inspections were made in Ward Two, where there were a large number of contagious diseases during the year. In case a nuisance was found notice was sent to abate the same, and all have been complied with except one which is waiting for legal action.

A new form of inspection blank was used late in the year, which gives the number of sleeping rooms and occupants of the same. The idea of this being to find if any overcrowding occurs in tenements or lodging houses. No overcrowding has been found to date. Following is the tabulated statement of conditions found:

Ward One, 5; Ward Two, 30; Ward Three, 2; Ward Four, 4; Ward Five, 1; Ward Six, 11.

Number of dwelling houses inspected,	47
dwelling houses and stores,	61
separate tenements inspected,	151
occupants over ten years of age,	595
occupants under ten years of age,	399
vacant tenements,	23
buildings with sewer connections,	41
buildings without sewer connections,	1
buildings on sewered street without sewer connections,	2
buildings having cesspools,	3
buildings having privies,	4
buildings having city water,	52
buildings having well water,	0
privies examined,	1

Number of privies well located,	1
privies in good condition,	1
privies in poor condition,	2
cesspools examined,	3
cesspools well located,	3
cesspools in good condition,	2
cesspools in poor condition,	1
yards in good condition,	21
yards in poor condition,	32
out-buildings in good condition,	18
out-buildings in poor condition,	6
houses with good disposition of swill,	32
houses with poor disposition of swill,	19
cellars in good condition,	27
cellars in poor condition,	24
water closets examined,	148
water closets in good condition,	121
water closets in poor condition,	27
water closets in good location,	129
water closets in poor location,	19
water closets with good ventilation,	134
water closets with poor ventilation,	14
sinks examined,	164
sinks well trapped,	157
sinks poorly trapped,	7
bath tubs examined,	19
bath tubs well trapped,	19
basins examined,	15
basins well trapped,	15
wash trays examined,	6
wash trays trapped,	6
buildings having good house drains,	48
buildings having poor house drains,	3
buildings with proper ventilation of house drain,	49
buildings without proper ventilation of house drain,	3
buildings with drainage to surface,	1
buildings with drainage direct to river,	2

QUARANTINE EXPENSES.

DIPHTHERIA.

Twenty-nine patients were aided at home, detailed list of expenditures below:

Coal and wood,	\$7 90
Groceries and provisions,	121 06
Medical attendance and medicine,	79 25
Milk,	8 40
Nursing care,	38 40
Board and care,	24 65
Reimbursement of wages,	287 93
Amount paid for taking of cultures,	111 00
	—————
	\$678 59

Twelve diphtheria patients were aided in hospitals in other cities in Massachusetts, at an expense of	633 44
Total expenses paid out of Board of Health ap- propriation for aid extended in diphtheria cases,	1,312 03

TYPHOID FEVER.

Eight cases of typhoid fever were aided at the Burbank Hospital, all state cases for which this department was reimbursed by the Commonwealth.

Expense for board and care at hospital was,	\$228 06
---	----------

SCARLET FEVER.

Two cases of scarlet fever were aided at an expense of For medical attendance.	\$10 50
---	---------

MEASLES.

One case of measles was furnished medicine at an expense of	\$.75
Total expenses of quarantine,	\$1,551 .34

EXPENSES INCURRED DURING DIPHTHERIA EPIDEMIC.

Services of physicians,	\$1,131 00
Services of bacteriologists,	811 00
Groceries and provisions,	724 70
Coal and wood,	84 90
Milk,	2 56
Medicine,	8 72
Board and room,	42 13
Services of police officers,	78 39
Services of assistant to agent,	42 10
Culture tubes,	161 50
Incidentals,	3 10
	—————
	\$3,090 10

The above amount was not paid out of the Board of Health appropriation, but was paid out of the incidental account.

TUBERCULOSIS EXPENSES.

Board and care at farms in Ashby,	
Mass.,	\$535 44
Board and care at State Sanatoria,	2,480 31
Board and care at State Hospital at	
Tewksbury,	134 00
Board and care in other cities,	110 57
Transportation,	53 08
Groceries and provisions (furnished	
patients at homes),	66 06
Milk, (furnished patients at homes),	109 89
Eggs, (furnished patients at homes),	22 62
Medical attendance and medicine, (furnished	
patients at homes),	84 40
Nursing care, (furnished patients at homes)	219 20
Coal and wood, (furnished patients at homes),	13 05
Clothing,	154 68
Blankets,	24 00
Overshoes,	64 32
Paid Burbank Hospital for one patient	
treated for tuberculosis of knee,	76 00
	—————
Total,	\$4,147 62

Fifty-six patients were aided during the year: One at Burbank Hospital, four at Tewksbury State Hospital, 20 at Westfield Sanatorium, 10 at Rutland Sanatorium, one at North Reading Sanatorium, three at farms, two in other cities, and 15 at homes in this city.

EXPENSES INCURRED IN CARING FOR CEREBRO-SPINAL MENINGITIS CASES.

Medical attendance,	\$126 00
Nursing care,	127 10
Amount paid to police department for services of officers to guard house,	43 56
Medicines,	18 90
Supplies,	31 09
Groceries and provisions,	15 92
Meals for nurses,	27 25
Paid Directory for Nurses, Boston, Mass., for furnishing two nurses,	4 00
Ice,	40
Milk,	2 44
Trucking,	2 50
Wood,	1 00
	\$400 16

RECEIPTS.

Appropriation,	\$10,000 00
Reimbursements from Commonwealth for contagious diseases,	487 57
Reimbursements from private person for tuberculosis case,	12 57
Check from J. R. Fallon for culture tubes,	16 50
Cash Receipts :	
129 milk licenses,	64 50
11 oleomargarine licenses,	5 50
14 milk samples tested,	3 50
10 manicure and massage licenses,	10 00
5 undertaker's licenses,	5 00
3 stable licenses,	3 00

1 slaughter house license,	\$1 00
1 rendering license,	1 00
1 permit to collect butcher's waste,	1 00
	—————
	\$10,611 14

Debts receivable :

Amount due from Commonwealth,	\$460 19
Amount due from town of Concord,	72 44
Amount due from city of Lowell,	4 50
	—————
	537 13
Total,	—————
	\$11,148 27

EXPENDITURES.

Salaries,	\$5,486 87
Tuberculosis expenditures,	4,147 62
Quarantine expenses (diphtheria, scar-	
let fever, typhoid fever and measles),	1,551 34
Quarantine expenses (cerebro-spinal	
meningitis,) .	400 16
Stationery, printing, advertising,	284 31
Automobile expenses,	1,309 64
Disinfectants,	187 20
Milk laboratory supplies,	46 26
Bacteriological laboratory supplies,	112 50
Telephone,	46 82
Ice,	47 04
Postage,	16 70
Express,	21 60
Car tickets,	8 80
Anti-rabic serum,	25 00
Incidentals,	183 52
	—————
Deficit balance, Dec. 1, 1911,	\$13,850 38
	—————
Respectfully submitted,	\$2,702 11

FREDERICK H. THOMPSON, M. D.,

JAMES BARR,

D. S. WOODWORTH, M. D.,

Board of Health.

**REPORT OF INSPECTOR OF MEATS AND
PROVISIONS.**

FITCHBURG, MASS., December 31, 1911.

To the Board of Health,

GENTLEMEN:—Herein is submitted the annual report of the Inspector of Meats and Provisions.

SLAUGHTER HOUSE REPORT.

The amount of work in this department is increasing, and it is gratifying to note that the loss from tubercular animals is less than in former years.

The state regulations requiring a tuberculin test on cattle brought into the state of Massachusetts, is doubtless one of the principal reasons for this improvement.

ANIMALS SLAUGHTERED, INSPECTED AND STAMPED IN 1911.

	Beef	Swine	Veals	Sheep
January,	25	23	42	
February,	23	10	28	
March,	15	20	23	
April,	8	12	50	
May,	10	19	47	
June,	8	16	48	
July,	9	19	42	
August,	22	14	62	
September,	22	33	38	
October,	29	64	43	
November,	32	43	43	63
December,	39	80	55	
 Total,	 242	 350	 521	 63

In addition 12 beef were condemned as tubercular, and 20 veals were below the standard, total number of animals slaughtered and inspected at the slaughter house and on farms in 1911, 1208 head.

As in former years nearly all our meat markets are properly kept. But in some cases, and in different parts of the city, over ripe meat has been found and condemned.

Respectfully submitted,

H. D. CLARK, D. V. S.,

Inspector of Meats and Provisions.

BAKERIES

In accordance with the provisions of the Public Statutes the bakeries of this city, twenty in number, were inspected during the months of December, 1911, and January, 1912.

Two new bakeries have been opened since the last inspection, one of which is in operation at present and the other was discontinued last July.

A few bakeries are poorly situated and the proprietor of one has promised to discontinue in the spring, and open a bakery in another location.

The owners of four bakeries tolerated unclean premises and several others unclean walls and ceilings in bake rooms. The Board of Health ordered all of these to be properly cleaned and placed in a sanitary condition.

During the current year there were only two changes in ownership of bakeries, which fact has in no way lowered the standard of our bakeries.

ICE CREAM.

Six establishments where ice cream is manufactured for sale in this city have been inspected during the year, and five certificates of approval have been issued. Conditions were found excellent in one, very good in two, unsatisfactory in two others, and so bad, in one case, that approval was refused and this establishment was closed. Conditions in the two classed as unsatisfactory were made satisfactory to the Board of Health, and certificates issued to the proprietors.

For the bacteriological analyses of specimens taken from these six establishments you are referred to Dr. Mason's report, which shows that all contain more than 500,000 bacteria per c.c., which is the limit allowed by Article 4, Section 2, of the By-

Laws. Analysis reported by other Boards of Health confirm Dr. Mason's opinions as to the absurdity of any such standard, which the courts would not sustain.

During the year your Inspector condemned several veals found for sale in the markets, because of being underweight and understamped.

In June a general inspection of grocery stores, meat markets, fish markets and fruit stands was made, and copies of the Board of Health regulations delivered. In the late summer and fall months frequent inspections of the fruit stands were made.

VITAL STATISTICS

Following you will find the death reports, together with the tabulated statements of the causes of death, ages, sex, social conditions, etc., to which you are respectfully referred.

DEATH REPORT FROM JANUARY 1, 1911, TO JANUARY 1, 1912

Cause of Death	Sex	Social Condition	Native	Deaths at all ages											
				Under 1 year	1 to 5 years	5 to 10 years	10 to 20 years	20 to 30 years	30 to 40 years	40 to 50 years	50 to 60 years	60 to 70 years	70 to 80 years	80 to 90 years	90 to 100 years
I. GENERAL DISEASES															
a. Epidemic Diseases															
Scarlet Fever.....	3	2	1	1	2	...	3	1	1	1	1	1	1	1	1
Typhoid Fever.....	1	1	1	1	2	...	13	2	1	1	2	1	1	1	1
Diphtheria.....	16	7	8	15	...	10	5	1	2	2	1	1	1	1	1
Whooping Cough.....	10	5	5	10	...	1	1	1	2	1	1	2	1	1	1
Influenza.....	1	1	1	1	...	1	1	1	1	1	1	1	1	1	1
b. Other General Diseases															
Tuberculosis of Lungs.....	31	14	17	14	14	3	14	17	4	1	4	2	4	2	2
Tuberculosis of Spine.....	2	2	2	2	2	...	1	1	1	1	1	1	1	1	1
Cancer of Breast.....	3	3	3	1	1	2	1	1	1	1	1	1	1	1	1
Cancer of Face.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cancer of Liver.....	7	3	4	1	3	3	5	2	1	1	1	1	1	1	1
Cancer of Lung.....	2	1	2	1	2	...	2	1	1	1	1	1	1	1	1
Cancer of Neck.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cancer of Prostate.....	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Cancer of Rectum.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cancer of Stomach.....	5	4	4	1	1	1	2	3	1	1	1	1	1	1	1
Cancer of Ovary.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cancer of Uterus.....	4	4	4	4	4	4	2	2	2	2	2	2	2	2	2
Tuberculous Meningitis.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Diabetes Mellitus.....	8	3	5	1	2	1	5	3	3	3	1	1	1	1	1
Cancer of Brain.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pernicious Anemia.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Rheumatism.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Acute Alcoholism.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

DEATH REPORT FROM JANUARY 1, 1911, TO JANUARY 1, 1912

DEATH REPORT FROM JANUARY 1, 1911, TO JANUARY 1, 1912

DEATH REPORT FROM JANUARY 1, 1911, TO JANUARY 1, 1912

CAUSE OF DEATH	Sex	Social Condition	Native	Months	Deaths at all ages	
					Total	Male
X. MALFORMATIONS						
Patent Foramen Ovalis.....	1	1	1	1	1	1
Spina Bifida.....	1	1	1	1	1	1
Impenetrable Anus.....	1	1	1	1	1	1
XI. DISEASES OF EARLY INFANCY						
Infantile Debility.....	16	8	8	16	2	1
Premature Birth.....	16	10	6	16	1	1
Inanition.....	2	1	1	2	1	1
Malnutrition.....	2	1	2	2	1	1
Marsasmus.....	3	1	2	3	1	1
Accident in Labor, Eclampsia.....	1	1	1	1	1	1
Exhaustion following Hard Labor.....	2	1	1	2	1	1
Hemorrhage of Spermatic Cord.....	1	1	1	1	1	1
Injuries to the Head caused by Instrumental Delivery.....	1	1	1	1	1	1
Pressure on Cord during Labor.....	1	1	1	1	1	1
XII. OLD AGE						
Senile Debility.....	7	4	3	2	5	1
Senile Dementia.....	2	2	1	1	1	1
XIII. AFFECTIONS PRODUCED BY EXTERNAL CAUSES						
Accidental Acute Phosphorus Poisoning, Child ate Phosphorus from tips of Matches.....	1	1	1	1	1	1
Acetanilid Poisoning, Accidental.....	1	1	1	1	1	1
Heat Prostration.....	3	1	2	2	1	1
Under 1 year.....	1	1	1	1	1	1
1 to 5 years.....	5	10	10	10	3	3
10 to 20 years.....	20	10	20	20	1	1
20 to 30 years.....	30	10	30	30	1	1
30 to 40 years.....	40	10	40	40	1	1
40 to 50 years.....	50	10	50	50	1	1
50 to 60 years.....	60	10	60	60	1	1
60 to 70 years.....	70	10	70	70	1	1
70 to 80 years.....	80	10	80	80	1	1
80 to 90 years.....	90	10	90	90	1	1
90 to 100 years.....	90	10	90	90	1	1

DEATH REPORT FROM JANUARY 1, 1911, TO JANUARY 1, 1912

**PRINCIPAL CAUSES OF DEATH—JANUARY 1, 1911,
TO JANUARY 1, 1912.**

Heart disease,	66
Pneumonia,	61
Tuberculosis of lungs and larynx,	31
Cancers,	28
Arterio sclerosis,	23
Cerebral hemorrhage,	16
Infantile debility,	16
Premature birth,	16
Diphtheria and croup,	15
Whooping cough,	10
Deaths from violence, homicide,	1
Deaths from violence, suicide,	5
Deaths from violence, accidents,	24
	<u>— 322</u>
Number of deaths from all other causes not specified above,	176
Total,	<u>498</u>
Total number of still births,	<u>45</u>

DEATHS BY AGES—MALE AND FEMALE.

	Males	Females	Totals
Under one year,	53	63	116
One to two years,	9	12	21
Two to three years,	9	3	12
Three to four years,	4	3	7
Four to five years,	2	4	6
Five to ten years,	3	3	6
Ten to fifteen years,	3	3	6
Fifteen to twenty years,	3	5	8
Twenty to thirty years,	18	24	42
Thirty to forty years,	18	16	34
Forty to fifty years,	15	12	27
Fifty to sixty years,	32	21	53
Sixty to seventy years,	31	35	66
Seventy to eighty years,	25	29	54
Eighty to ninety years,	12	24	36
Ninety to one hundred years,	2	2	4
 Totals,	 239	 259	 498

NATIVITY AND PARENTAGE OF DECEASED.

Nativity		Parentage	
United States,	326	American,	123
Canada and Provinces,	44	Provincial,	97
England,	8	English,	10
Ireland,	47	Irish,	85
Germany,	13	German,	15
Italy,	13	Italian,	28
Sweden,	5	Swedish,	10
Finland,	24	Finnish,	43
Scotland,	8	Scotch,	8
Russia,	2	Russian,	8
Turkey,	1	Turkish,	1
Armenia,	1	Armenian,	2
Wales,	2	Welsh,	2
Greece,	3	Greek,	4
Unknown,	1	Mixed,	43
		Unknown,	19
	498		498
Number of bodies buried in Laurel Hill Cemetery,			20
Number of bodies buried in Forest Hill Cemetery,			164
Number of bodies buried in St. Bernard's Cemetery,			149
Number of bodies buried in St. Joseph's Cemetery,			84
Number of bodies taken out of town for burial,			81
Number of bodies brought from out of town buried in Laurel Hill Cemetery,			9
Number of bodies brought from out of town buried in Forest Hill Cemetery,			43
Number of bodies brought from out of town buried in St. Bernard's Cemetery,			35
Number of bodies brought from out of town buried in St. Joseph's Cemetery,			5

Following are the tables relating to contagious diseases showing the facts connected with the same :

TABLE A

TABLE B

Contagious Diseases													Total Cases	Total Deaths	Percentage of Deaths to Cases
	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6			
	Number of Cases	Number of Deaths													
Diphtheria															
Clinical Cases...	19	105	8	29	6	25	1	7	20	205	15	7.31
Diphtheria															
Carrier Cases...	11	583	25	8	18	18	2	29	668			
Scarlet Fever.....	2	7	1	18	1	6	7	18	1	48	1	2,08		
Typhoid Fever.....	2	14	1	18	1	4	2	7	1	43	3	6.97		
Tuberculosis	4	2	29	12	13	9	19	6	1	10	3	81	31	38.27	
Measles.....	4	2	9	10	4	2	31			
Totals.....	42	2	740	21	92	16	82	1	28	1	86	5	1074	50	

TABLE C

TABLE

Showing death rate per 1,000 by months, from Jan. 1, 1911, to Jan. 1, 1912. Population, 37,826.

January,	13.06	July,	13.63
February,	13.06	August,	12.05
March,	12.05	September,	9.83
April,	15.22	October,	13.95
May,	10.46	November,	14.57
June,	12.68	December,	17.76

Death rate per 1,000 for 1911, and each of the preceding years since 1890. Population, 37,826.

1911,	13.16	1900,	15.00
1910,	13.35	1899,	13.82
1909,	13.74	1898,	13.72
1908,	14.81	1897,	15.80
1907,	14.80	1896,	15.45
1906,	15.38	1895,	15.19
1905,	13.68	1894,	12.67
1904,	11.61	1893,	16.43
1903,	13.08	1892,	20.78
1902,	13.35	1891,	18.60
1901,	14.87	1890,	14.88

REPORT OF THE INSPECTOR OF PLUMBING.

To the Members of the Board of Health:—

GENTLEMEN:—I herewith submit my eighteenth annual report and the twenty-eighth report of the Inspector of Plumbing for the year 1911. The plumbing ordinance was revised during the year, the new ordinance to go into effect January 1, 1912. Following are the changes: Rain water separate to cellar wall. Size of rain water conductor to correspond with size of roof. Waste pipes from bath room fixtures not connected with lead bends. Interior toilet or bath rooms to be ventilated by air shaft at least three square feet capacity. Local vents to be 16 ounce copper, three feet from water closet. Extra heavy soil,

waste and vent pipes in place of standard. Sizes specified for back air ventilation. Top fixtures not back vented within a certain distance of vent stack. Distance back air pipes may be taken from fixture trap. Size of soil pipe according to fixtures on it. Following is a detailed list of the fixtures installed, permits issued, inspections made, etc.

NUMBER OF PERMITS ISSUED.

Number of new buildings plumbed,	122
Number of old buildings newly plumbed,	79
Number of old buildings with additions and repairs,	87
Total permits issued,	<hr/> 288

BUILDINGS.

Residences,	33
Two tenement houses,	36
Three tenement houses,	29
Four tenement houses,	4
Six tenement houses,	7
Seven tenement houses,	3
Tenements and stores,	5
Manufacturing,	1
Stores,	2
Club house,	1
Bath house,	1
Total,	<hr/> 122

NUMBER OF FIXTURES INSTALLED.

Water closets,	543
Sinks,	456
Bath tubs,	337
Wash bowls,	321
Wash trays, sets,	60
Urinals,	5
Drinking fountains,	4
Total fixtures installed,	<hr/> 1726

NUMBER OF BUILDINGS CONNECTED WITH THE SEWER DURING THE YEAR.

New buildings,	102
Old buildings,	30

NUMBER OF BUILDINGS CONNECTED WITH CESSPOOL.

New buildings,	18
Old buildings,	10

NUMBER OF BUILDINGS WITH DRAINAGE DIRECT TO RIVER.

New buildings,	2
Old buildings,	3
Barns connected with sewer,	4
Garages,	2

NUMBER OF INSPECTIONS MADE.

Water tests,	559
Final inspections,	270
Smoke tests,	219
Miscellaneous inspections,	414
	—
Total inspections made,	1472

Respectfully submitted,

JOHN F. BRESNAHAN,

Inspector of Plumbing.

REPORT OF THE INSPECTOR OF MILK.

To the Members of the Board of Health :—

GENTLEMEN : — I herewith submit my third annual report in accordance with the provisions of Chapter 405, Acts and Resolves of 1909.

The average daily amount of milk, skimmed milk, and cream sold in this city during the year is as follows :

Milk,	1,994 cans
Skimmed milk,	134 cans
Cream,	100 quarts

There has been a slight increase in the amount of milk sold daily, about 30 cans.

The location of dairies and amount of milk from each place, including those in our own city, are as follows:

	Dairies	Cans
Fitchburg,	49	519
Lunenburg,	57	442
Ashby,	46	300
Westminster,	29	209
Leominster,	16	166
Princeton,	13	131
New Ipswich, N. H.,	15	70
Ashburnham,	5	52
Shirley,	4	39
Sterling,	3	22
Townsend,	7	16
So. Royalston,	3	13
Mason, N. H.,	4	13
Greenville, N. H.,	3	7
Pratts Junction,	1	4
<hr/>	<hr/>	<hr/>
Total,	255	1,994

DAIRIES.

There were 98 dairies inspected and the table shows the location and ratings, the score card system being used, the same as last year.

	No. of Dairies	Over 75%	Under 75%
Fitchburg,	47	16	31
Westminster,	18	7	11
Ashby,	16	10	6
Lunenburg,	15	6	9
New Ipswich,	2	0	2
<hr/>	<hr/>	<hr/>	<hr/>
Total,	98	39	59

The same system of inspections was followed this year, as started last year, that is to make inspections of the dairies from which the milk showed a large amount of sediment or high count of bacteria. Seven more dairies were inspected this year

than last, making a total for the two years of 189. Twelve new milk rooms were built and one old one cleaned and put into use.

SAMPLES TESTED.

Milk,	578
Skimmed milk,	4
Cream,	9
<hr/>	
Total,	591
Samples collected,	547
Samples brought to office,	44
<hr/>	
Total,	591

SAMPLES TESTED FOR BUTTER FATS AND SOLIDS.

Samples collected below standard,	41
Samples brought to office below standard,	7
<hr/>	
Total,	48
Samples above legal standard,	543

The samples of skimmed milk and cream were above the legal standard.

PROSECUTIONS.

Four milk producers were convicted of having watered milk in their possession and three were fined \$50 and the fourth one \$10. One milk producer carried his case to the Supreme Court, but the decision of the Police and Superior Courts was not changed and he was obliged to pay a fine of \$50. In the matter of prosecutions I have had the assistance of Mr. M. P. Crowe, Collector for the State Board of Health, to whom I am greatly indebted for his prompt service, and in each case that was brought to court his able and efficient handling of the cases.

BACTERIAL TESTS.

This work, which was formerly done by the Bacteriologist of the Board of Health, Dr. Mason, was done by me.

Two hundred and forty-five samples of milk were tested from 210 dairies.

1st samples,	210			
2nd samples,	31			
3rd samples,	4			
 Total,	 <hr/>			
	245			
		1st Samples	2nd Samples	3rd Samples
1,000 to 10,000	17	3	0	
11,000 to 50,000	43	11	0	
51,000 to 150,000	20	5	0	
151,000 to 300,000	74	8	4	
over 300,000	56	4	0	
 Totals,	 <hr/>	210	31	4

In addition to the bacterial test each sample was strained through a cotton disc and a comparison made between the strainer and the bacteria test. Some of the strainers which showed considerable sediment had quite a low bacteria count. The strainers which showed sediment were cut in halves, one-half being sent to the producer with the result of the test, the other half being kept for record.

INSPECTIONS OF STORES AND RESTAURANTS.

Fifty-seven inspections of stores, restaurants and lunch carts were made. At two restaurants the top of the milk had been removed to serve with coffee. Notice was given to the owners that if this was repeated that prosecutions would follow. Samples of milk were taken later at these places which were found to be all right. Conditions at all of these places were found to be satisfactory.

RECEIPTS.

129 milk licenses, \$.50,	\$64 50
11 oleomargarine, \$.50,	5 50
14 milk samples tested, \$.25,	3 50
 Total,	 <hr/>
	\$73 50

EXPENDITURES.

Milk laboratory supplies,	\$46 26
Respectfully submitted,	
JOHN F. BRESNAHAN, <i>Inspector of Milk.</i>	

REPORT OF BACTERIOLOGIST.

To the Board of Health of the City of Fitchburg :

GENTLEMEN:—My thirteenth report as Bacteriologist of the Board, covering the year 1911, is herewith respectfully submitted.

DIPHTHERIA.

The epidemic of this disease, which began in the early autumn of 1910, has continued up to the present time. With the exception of June, 1911, there was an abatement in the number of cases during the warm months, as is usual, but the last three months of 1911 gave nearly as many clinical cases as did the same period in 1910. The disease appears to be pretty well established in certain districts and will be difficult to eradicate. The need of an isolation hospital is urgent to prevent the infection of other members of the family.

The number of cultures sent in and examined during the year was 4643,—fourteen times as many as in 1910 and about three times as many as have been examined since the bacteriological department was established, in June, 1899.

The annexed table gives a summary of the cultures examined from clinical and infected, or carrier, cases, by months, and the results obtained.

	DIAGNOSIS				RELEASE				Miscellaneous	Total		
	Clinical		Carrier		Clinical		Carrier					
	+	-	+	-	+	-	+	-				
January.....	32	36	572	1,209	9	24	3	59	12	1,956		
February.....	14	29	36	678	12	59	20	502	16	1,366		
March.....	2	12	4	18	25	27	12	6	27	133		
April.....	2	3	0	0	13	12	3	4	10	147		
May.....	6	2	2	16	7	12	3	4	0	52		
June.....	17	5	9	129	20	36	3	11	0	230		
July.....	6	2	2	22	8	22	5	3	4	74		
August.....	7	2	9	40	2	14	0	2	2	78		
September.....	8	2	3	36	4	22	4	6	2	87		
October.....	23	6	20	167	17	42	9	20	1	305		
November.....	15	5	8	93	9	46	4	12	3	195		
December.....	10	6	3	53	6	29	1	2	10	120		
	142	110	668	2,491	132	345	67	631	87	4,643		

The eighty-seven cultures classed as miscellaneous were all negative and were from nurses and members of families who took care of patients ill with diphtheria, and other cultures, which might be termed precautionary, being extra releases in persistent cases, etc. These will not be considered again in this report.

The following table shows the distribution of clinical cases during the year:

CLINICAL CASES (Diagnosis)

	Primary		Secondary		Reported without Culture	Total Cases
	+	-	+	-		
January	32	36	0	0	13	45
February	14	28	0	1	8	22
March.....	2	10	0	2	8	10
April	2	3	0	0	3	5
May.....	6	2	0	0	2	8
June	16	5	1	0	7	24
July.....	6	2	0	0	1	7
August	7	2	0	0	2	9
September	7	2	1	0	0	8
October	23	6	0	0	6	29
November.....	15	3	0	2	3	18
December	10	5	0	1	10	20
	140	104	2	6	63	205

The next table gives a summary of the 477 cultures taken for release of clinical cases. Since early in February two consecutive negatives have been required for release of clinical cases, which not only doubles the number of release cultures, but also increases the number by introducing the inevitable "premature" negative, i.e., a negative followed by a positive, which necessitates beginning all over again to get the two consecutive negatives.

CLINICAL CASES (Release)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	Total
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	Number Per capita Prevalence
January	8	23	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9 24
February	6	29	5	19	1	6	..	4	..	1	..	..	..	..	..	..	..	..	..	..	12 59 5
March	6	4	8	6	3	2	5	2	4	2	..	1	1	..	1	..	..	..	..	..	25 27 3
April	3	2	3	1	3	1	2	1	..	1	..	1	1	..	1	..	..	..	..	..	13 12 2
May	2	2	..	3	..	2	1	1	..	2	..	..	..	..	..	..	1	..	1	..	7 12 3
June	9	10	5	11	3	4	..	6	..	3	1	..	1	..	..	..	..	..	..	1	20 36 2
July	5	5	3	9	..	6	..	2	..	2	..	..	..	..	..	..	..	..	..	..	8 22 1
August	2	6	.	5	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2 14
Sept'ber	2	6	1	10	1	4	..	1	..	..	..	..	..	..	..	..	..	..	..	..	4 22 1
October	8	16	7	15	1	7	1	2	..	1	..	1	..	..	..	..	..	..	..	..	17 42 4
Nov'ber	3	14	3	16	1	5	1	7	1	2	..	1	..	..	..	..	..	..	..	..	9 46 2
Dec'ber	3	9	2	11	..	6	1	1	..	1	..	1	..	..	..	..	..	..	..	..	6 29
Totals	37	126	33	111	14	48	7	32	4	15	4	4	4	1	1	2	1	1	..	1	132 345 23

Thirty-seven cases were released on first culture, prior to the promulgation of the rule requiring two successive negatives, the average duration of quarantine being eighteen days. Eighty-one cases were released on second negative, the duration of quarantine being about the same as in the cases released on first culture. Twenty-three were released on third culture with an average duration of twenty-two days; twenty on fourth culture, average twenty-five days; longest, forty-five days; eleven on fifth culture, average twenty-six days, longest, thirty-six days; three on sixth culture. One case required nine releases, another ten and the most persistent case during the year required twenty cultures for release. There were two premature negatives in this case and the duration was sixty-three days.

SWAB EXAMINATION.

The swab was used in connection with serum in 140 clinical cases for diagnosis with the following results:

Swab +	Serum + in 64 cases.
Swab -	Serum - in 59 cases.
Swab -	Serum + in 5 cases.
Swab ?	Serum + in 7 cases.
Swab ?	Serum - in 5 cases.
<hr/>	
Total,	140 cases.

Showing that the swab gave the correct diagnosis in 88% of the cases.

CARRIER CASES.

The study of carrier cases and of subsequent developments on account of them, in the families in which they occurred, has proved exceedingly interesting. There were 668 carriers discovered during the wholesale culturing of school children, members of families containing infected school cases, in the latter part of January and the first week in February, 1911, (when nearly 3000 cultures were taken and examined within a period of twelve days), and also during the remaining part of the year in members of families where a clinical case occurred.

Table one shows the distribution of carrier cases through the year. As a rule these cases were found in families harboring a clinical case, but in quite a number of instances, particularly in families where an infected school case was discovered, several members were found to have infected throats, but no clinical symptoms. After disposing of the releasing of these carriers I propose to cite a few developments in the diphtheria line in families having carrier cases early in the year, simply to show that these cases are of pretty serious importance and should be discovered, if possible, and, when found, should be kept away from other people as long as the infection persists.

In connection with carrier diagnosis it is of interest to note that out of the total of 3129 cultures of this variety taken, 1012 were from school children and 2117 from families; and it is especially important, as designating the strong hold of the disease, to state that of the 239 cultures from school children which proved positive, over two hundred were from children attending St. Joseph's parochial school in the Cleghorn district. About eight hundred cultures were taken in this school and fully 25 to 30% were positive. Of the more than two hundred cultures taken from children attending the public schools in other parts of the city, when there was evidence of some infection, less than 10% were positive. Likewise, out of the 2117 family cultures taken during the year, 429 proved positive, of which nearly 350 were from families residing in the Cleghorn district.

Taking the above figures and in connection with them, the fact that there have been 150 clinical cases in the Cleghorn district since the epidemic began 16 or 17 months ago, it would seem to be pretty evident where the disease has been and still is firmly established.

RELEASE OF CARRIER CASES.

Table 1 gives the distribution of releases of carriers during the year, and it is not necessary to make a special table of greater detail. The number of releases is less than the number of carriers found by culture, because in the rush from January 26 to February 6, 1911, when nearly 3000 cultures were taken, some of the names and addresses on the tubes were incorrect and the cases could not be located, and again a number em-

braced the opportunity, between the taking of the culture and the report on it, to skip to Canada, or parts unknown. Most of the carriers were released on first culture within a week or ten days. Quite a number, however, proved more persistently positive, requiring two or three cultures before a negative was obtained. Four cases required four cultures, two required five cultures, one six cultures and one each required seven, eight, nine and ten cultures before release. Two premature negatives were obtained. The duration in the three longest positive cases was 45, 52 and 64 days. In all the very persistent cases, the guinea pig test was resorted to and the bacilli found to be virulent in all cases except one, which was, in consequence, released after eight positive cultures.

Before closing this brief and imperfect report on the diphtheria conditions in 1911, I wish to mention a very few instances of infection and reinfection. The most striking case was in a house near the center of the Cleghorn district, where there were three clinical cases in January, three clinical and one carrier in February, and two clinical and two carrier cases in April. Two of the cases were clinical twice and carriers twice, and one was a carrier that later developed into a clinical. The house was practically in quarantine for over five months and will doubtless be heard from again before this year is out.

In another family a fatal case occurred and five carrier cases were found in January. Three of these carriers became clinicals in February and March and one carrier was found in March.

In another family a fatal case and two carriers occurred in March. The family moved out during the early fall and another family soon moved in. In December three clinical cases (one fatal) occurred in the family that moved in.

Finally, I wish to enumerate a very few cases where clinical cases occurred in the latter half of 1910 and which furnished carrier cases in 1911, and also a few instances when *carrier cases only* were discovered in 1911 and which later in the year furnished clinical cases.

CARRIERS FOLLOWING CLINICALS.

	Clinicals in 1910	Clinicals in 1911
1.	5	8
2.	4	19
3.	6	2
4.	1	12
5.	5	2

CLINICALS FOLLOWING CARRIERS.

	Carriers early in 1911	Clinicals later in 1911
1.	7	3 (1 fatal)
2.	5	3
3.	6	4
4.	3	3 (1 fatal)
5.	7	1 (also 3 carriers in November)

The above 13 instances are cited as being the most striking among the numerous similar ones noted during the past 16 months. These however are amply sufficient to afford food for thought and suggest at least three questions worthy of careful consideration. *First*, Were the carrier cases discovered early in the year, in families having no clinical cases, responsible for the one or more clinical cases that developed in those families later in the year? I think they were. None of the houses containing only carrier cases in January and February were fumigated, disinfected or cleaned up, and the cases were in all parts of the house.

Second, Is fumigation effective? The third instance cited above would seem to indicate that it was not. Fumigation was thorough in this case, as it was in all cases where clinicals occurred; and in numerous instances clinicals, or carriers, or both, developed in these houses later but it is limited to the room and the furniture, etc., therein, in which the patient is supposed to remain until released. Unfortunately in some authentic cases and in a good many cases where proof is lacking, this supposition is not correct.

Third, How can the spread of disease in families be prevented? In at least one instance every member of the family was infected from one clinical case in that family and in not a few instances one to four clinical cases have developed in

tolerably rapid succession within two weeks of the appearance of the initial case in a family. Whenever a case was reported, cultures have, with the exception of the entire month of April and the last week or two in December, when the practice was, for some reason omitted, been immediately taken from all the other members of the family and examined and reported on the following day. In quite a number of instances where all proved negative, two or three members of the family were reported clinical cases in the course of ten days or two weeks. Now these cases were *not* infected at the time when the negative family cultures were taken. If they had been they would have been positive, or would have shown clinical symptoms sooner, the period of incubation being generally only a few days. Hence the only explanation to account for infection producing clinical symptoms, 10 to 14 days after the negative culture, is that proper isolation of the patient first reported was not carried out. In many tenements the arrangement of the few rooms occupied makes proper isolation of the patient practically impossible, though the family may try to carry out the rules of the Board in regard to this point to the best of their ability. An isolation hospital is imperatively needed for such cases as cannot or will not be properly isolated at their homes. An isolation hospital was maintained for a few months (February to June) but was closed as soon as possible to save expense. Had it been open the last three months of 1911 a good deal of sickness and infection would have been prevented.

TYPHOID FEVER.

The number of Widal tests during 1911 were nearly as large as in 1910, and considerably above the average number in previous years. This was due to the fact that in July, 1911, a number of cases were found on a milkman's route, and samples of blood from this milkman and his family and from the members of the families furnishing milk for his route were obtained and subjected to the Widal test. All lived in an adjoining town and all were negative, as was natural.

Ninety-five Widals were done for 88 persons. Seventeen were positive, one being a second positive and another a positive following a negative. Seventy-six were negative, one

following a positive, three second negatives and one third negative. Two were atypical.

Quite a number of diazo tests were done, but as the Board does not consider the test an essential one I will not bother you with statistics of them.

TUBERCULOSIS.

One hundred and seventy-eight samples of sputum were sent in for examination, of which 170 were first, 6 second and 2 third samples. Thirty-four were positive, one being a second sample.

ICE CREAM.

On July 24th and 29th, plates were made of two quarts of samples of ice cream from six of the principal manufacturers of this popular and delicious form of summer refreshment, in the vain hope that they might be under the bacterial limit set by the rule of the Board of Health. In the plates made July 24 the lowest count was 750,000 bacteria per cubic centimeter and the highest 13,290,000 per cubic centimeter. The other four ran from over 2,000,000 to nearly 10,000,000 per cubic centimeter. In the plates made July 29 the lowest count was 610,000 and the highest 12,100,000 per cubic centimeter, the other four ranging from 2,270,000 to 12,000,000 bacteria per cubic centimeter.

As the best and smoothest commercial ice cream is always made of cream from one to two or three days old, which is naturally very rich in harmless bacteria, just as cheese, butter, butter milk, etc., are, it would be remarkable to find a sample showing under 500,000 bacteria per cubic centimeter which is, I believe, the limit set by most Boards of Health, as it is by this Board. The rule had better be eliminated. All the samples were good and perfectly harmless to eat.

In conclusion I desire to say that that this report necessarily differs essentially from my previous reports on account of the totally new experience encountered during the year as regards diphtheria. Ever since the epidemic began to manifest itself I have kept close watch of developments, and this is especially true of the developments in the last six months of

the year which have, to my mind, shown very conclusively the vital connection of numerous carrier cases in January and February with a large number of clinical cases since July 1st.

While tables of figures are of importance and value, yet, in this report it seemed advisable to somewhat curtail statistics and pay more attention to conclusions drawn from observation of various sequences and consequences that have been carefully noted and studied in the past six months.

Trusting that this departure from my customary mainly statistical report will meet with the approval of the Board, this report is

Respectfully submitted,

ATHERTON P. MASON, M. D.,

Bacteriologist.

Fitchburg, Mass., January 11, 1912.

ORDERS OF THE BOARD WHICH HAVE BEEN COMPLIED WITH.

Following is a list of nuisances abated, and unsanitary conditions remedied by order of the Board :

Total number of nuisances inspected,	170
Houses connected with the sewer,	2
Cesspools cleaned,	1
Privies cleaned,	2
Rubbish in street,	2
Spitting nuisance,	1
Offensive privies remedied,	2
Minor defects in plumbing remedied,	11
Defective house drains remedied,	3
Swill nuisance,	3
Fowl and swine nuisance,	23
Stable nuisance,	6
Fowls kept without a license,	16
Dead animals,	5
Stables vacated,	2

Entire new system of plumbing,	1
New water closets installed,	3
Foul water closets,	4
Filthy premises,	5
House drainage nuisance,	9
Sewage water nuisance,	11
Cellars dirty,	4
Dirty yards cleaned,	16
Catch-basin and manhole nuisance,	2
Dumping nuisance,	16
Stagnant water nuisance,	2
No nuisance found,	10
Houses vacated,	1
Barns occupied without license,	2
Privies abolished,	2
Swine kept without license,	39

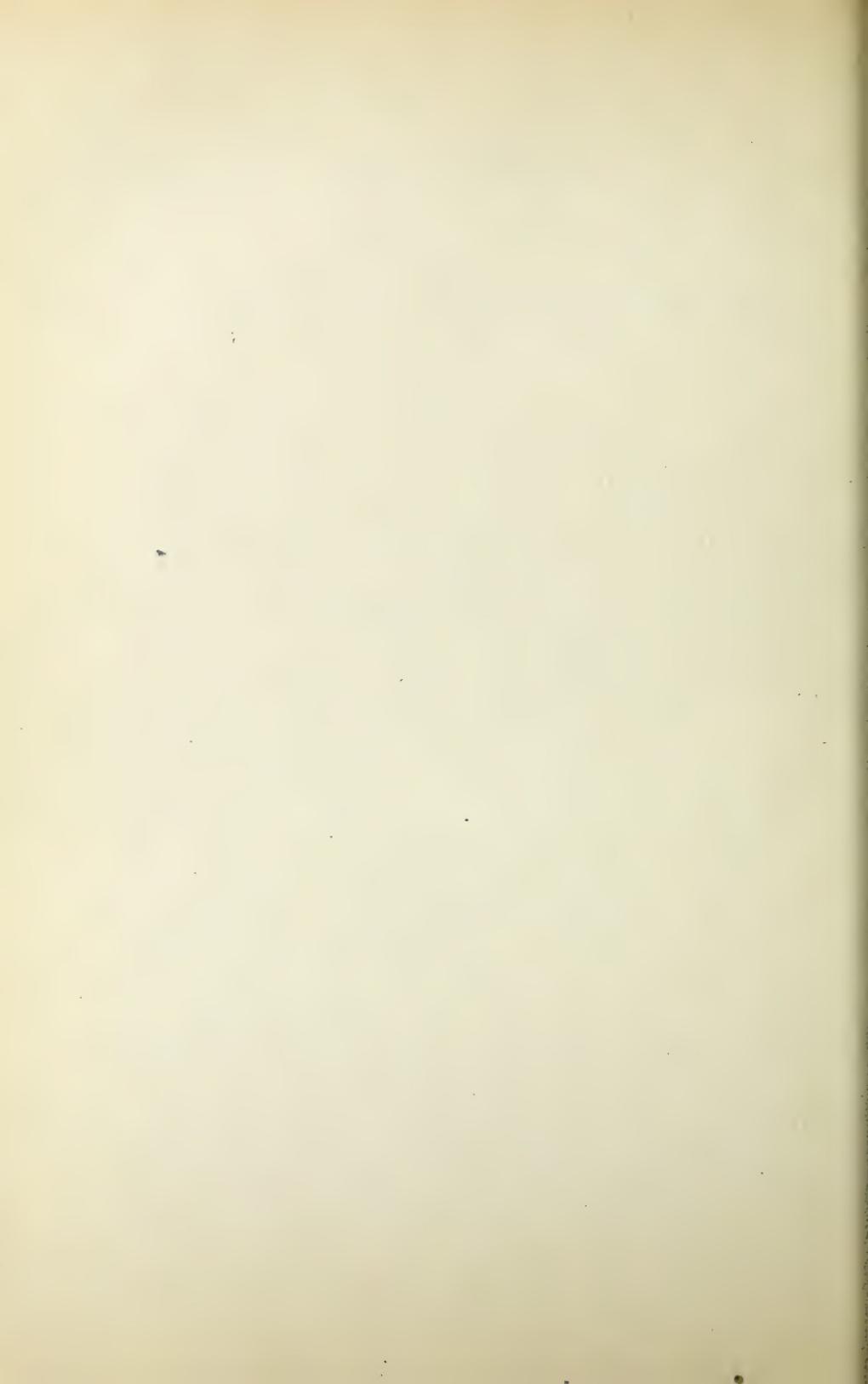
LICENSES AND PERMITS ISSUED.

Stable licenses,	3
Undertaker's licenses,	5
Slaughter house licenses,	1
Rendering licenses,	1
Permit to collect butcher's waste,	1
Manicure and massage licenses,	10
Fowl licenses,	116
Goat licenses,	1

ANNUAL REPORT
OF THE
INSPECTOR OF ANIMALS
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912



REPORT OF INSPECTOR OF ANIMALS

FITCHBURG, MASS., December 31, 1911.

To His Honor, the Mayor, and the Board of Aldermen:

GENTLEMEN:—Herein is submitted the annual report of the Inspector of Animals.

Following the instructions of the Chief of the State Cattle Bureau, the annual inspection of cattle and farm live stock was made in February and March instead of October and November, as formerly.

The total number of animals inspected were 864, of which 656 were cows and 212 young cattle, oxen and bulls. 261 swine were found.

During the year 21 cows were placed in quarantine as tubercular suspects. Four of these were later released and 17 were killed, 16 of which were found to be diseased with tuberculosis, and one was sound.

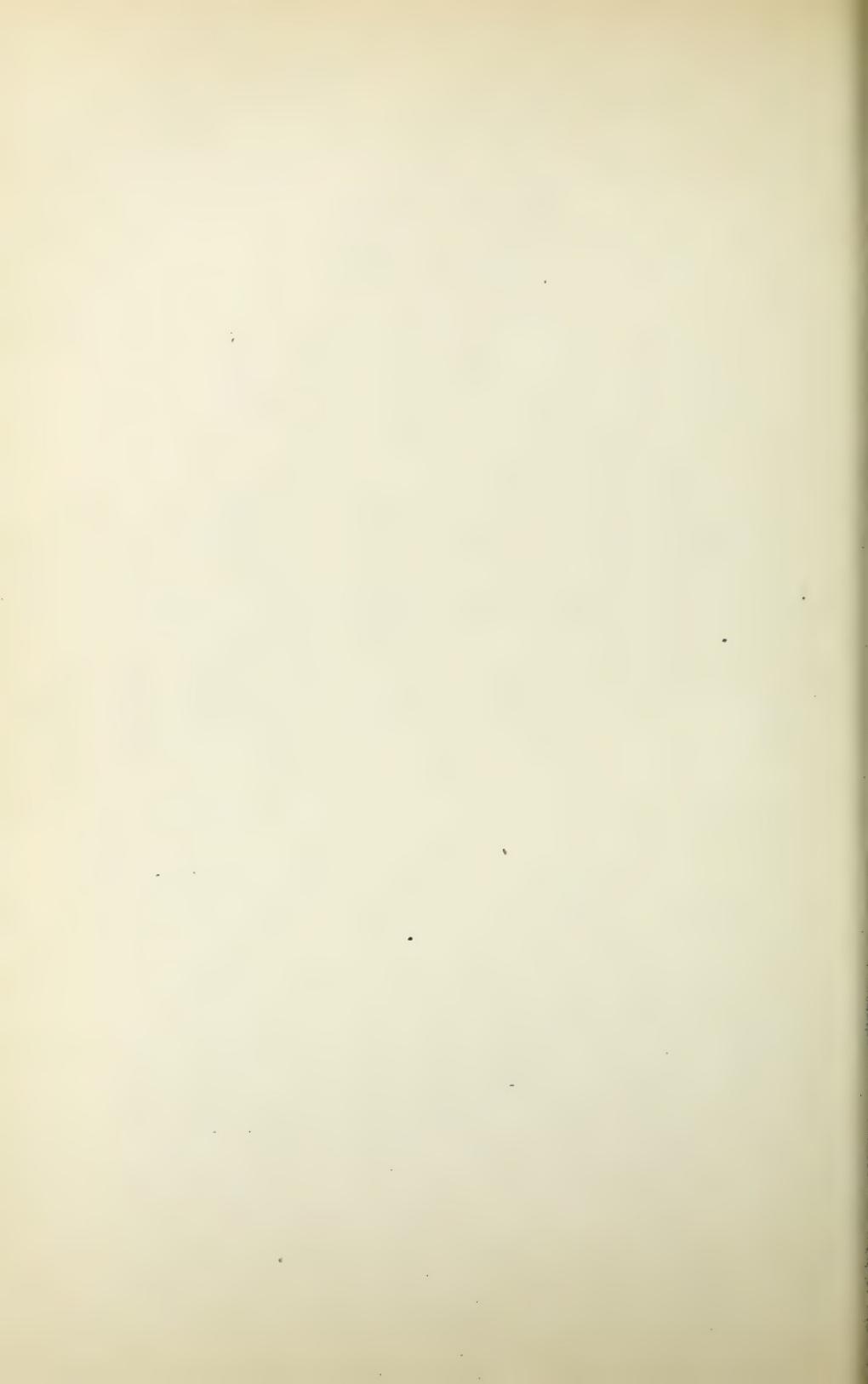
One cow was quarantined because of symptoms of actinomycosis, and later released.

In December a slight outbreak of hog cholera occurred in Fitchburg. The diseased animals were at once destroyed.

One dog was quarantined as a rabies suspect, and later released.

Although there have been many cases of glanders in Massachusetts this year, Fitchburg is again fortunate. Only four horses were placed in quarantine in 1911, and these were all later released.

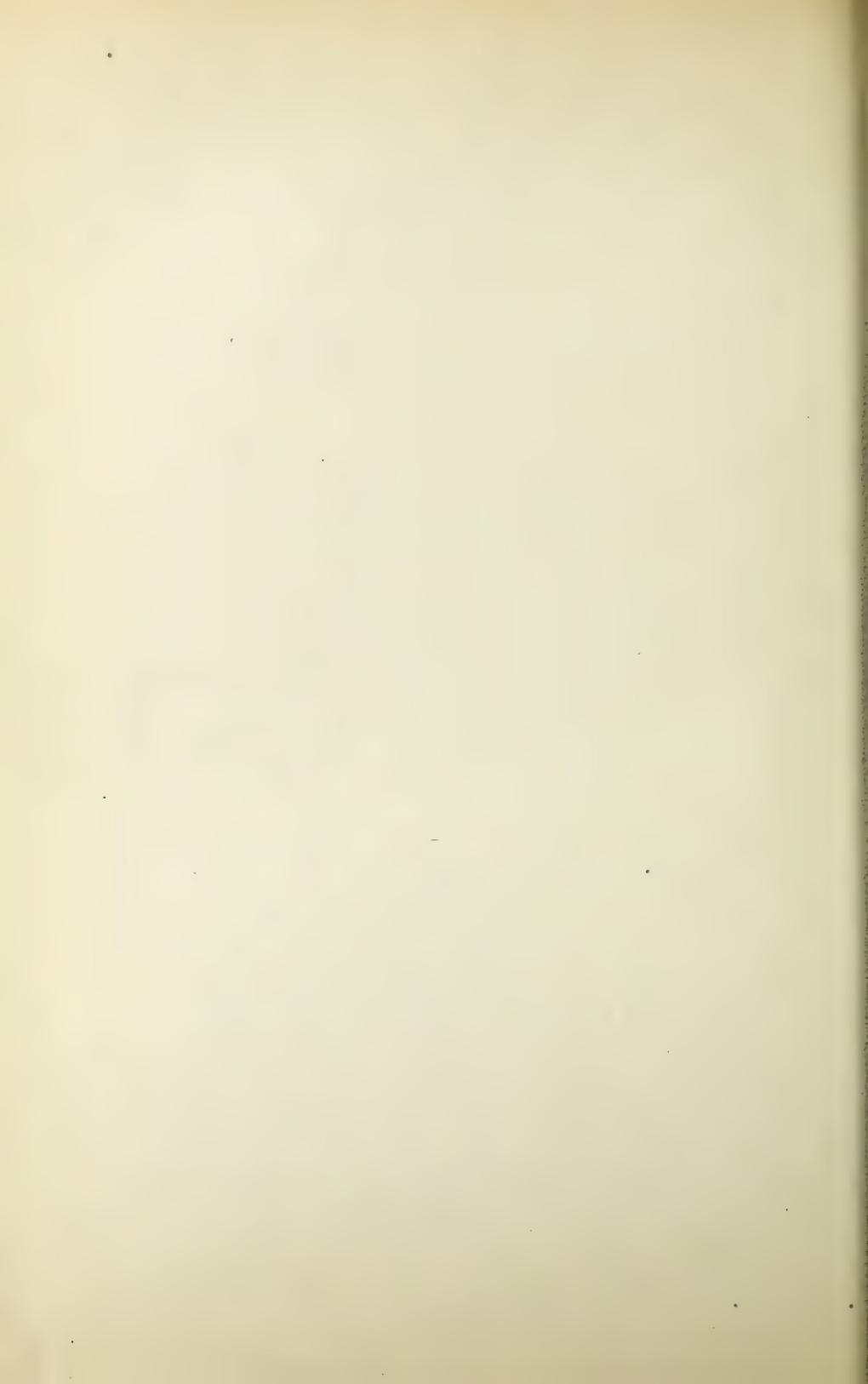
Respectfully submitted,
H. D. CLARK, D. V. S.,
Inspector of Animals.



THIRTY-NINTH
ANNUAL REPORT
OF THE
CHIEF OF POLICE
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911



REPORT OF THE CHIEF OF POLICE

OFFICE OF THE CHIEF OF POLICE,
FITCHBURG, MASS., Dec. 1, 1911.

To His Honor, the Mayor, and the City Council of the City of Fitchburg :

GENTLEMEN:—In compliance with the City Ordinances, I herewith submit for your consideration the thirty-ninth annual report of the Police Department for the year ending November 30, 1911.

Organization of the Police Department at the close of year, November 30, 1911, was as follows:

Chief, Apollos Q. Thayer.
Captain, John Flood.

Lieutenants, Hugh O. Irving, James F. Roy.

Inspectors, Bernard H. Flaherty, Thomas J. Godley.

Sergeants, Charles S. Brown, William E. Hackett.

PATROLMEN.

1. Arthur M. Sanderson,
2. Charles F. Donovan,
3. Herbert L. Flint,
4. John B. Gooch,
5. Henry L. Kendall,
6. Carlos L. Fallon,
7. Fred H. Estabrook,
8. George J. Bigelow,
9. Winfred H. Whiting,
10. Alphonse L. Hebert,
11. William H. H. Shattuck,
12. Albert R. Fellows,
13. Daniel F. Moran,
14. Peter F. Murphy,
15. David J. Whittemore,
16. Leoda Guenette,
17. William H. Grant,
18. Burton H. Clifford,
19. John P. Riordon,
20. James W. Wilson,
21. Alfred J. Couture,
22. Walter W. Wallace,
23. Francis H. Flaherty,
24. Edward R. Hart,
25. James J. Hanley,
26. Emil Berndt,
27. Valentin P. Cormier,
28. Percy H. Fitzgerald.

RESERVE OFFICERS.

Patrick W. Burns, 90 Forest street.

Edward H. Chainey, 76 Laurel street.

Ethan H. Washer, 40 Lincoln street.

John F. Crowley, 2 Crown street.

Frank B. Roddy, 58 Birch street.

Philip T. Kent, 37 Forest street.

Clerk, Miss Agnes M. Dunn.

Janitor, John Hassett.

BUSINESS OF POLICE DEPARTMENT.

Business performed by the Police Department for the year ending November 30, 1911: Total number of arrests, 1531; arrested on warrants, 282; arrested without warrants, 1249; males, 1491; females, 40; minors, 164; residents, 1134; non-residents, 397.

OFFENCES.

	Male	Female
Assault,	6	2
Assault and battery,	46	1
Assault on officer,	5	
Assault with dangerous weapon,	5	1
Assault, intent to murder,	1	
Assault on female child,	1	
Arrested for other officers,	25	1
Adultery,	2	1
Attempt to break and enter	1	
Abandoning infant,	1	
Burying a human body without a permit,	1	
Breaking and entering,	1	
Breaking, entering and larceny,	14	
Begging,	2	
Being present at game,	4	
Bastardy,	5	
Concealing mortgaged property,	1	
Capias,	2	
Concealing birth of bastard child,		1
Carrying loaded revolver without license,	7	

	Males	Females
Carrying concealed weapon,	1	
Disturbing the peace,	48	1
Drunkenness,	1005	15
Delinquent children,	52	1
Driving team away,	1	
Defrauding hotel,	1	
Default,	7	
Desertion,	1	
Evading car fare,	2	
Exposing person,	1	
Fornification,		1
Failing to support minor child,	1	
Gaming on Lord's day,	17	
Held for other officers,	25	
Hunting without license,	3	
Incest,	1	
Larceny,	46	1
Larceny from person,	1	
Larceny from building,	1	
Indecent assault,	1	
Lewdness,	5	4
Liquor law, violation of,	8	1
Loitering,	4	
Lewd and lascivious cohabitation,	2	2
Manslaughter,	1	
Neglected children,	6	5
Non-support,	24	
Operating automobile without a license,	1	
Operating motorcycle without a license,	2	
Perjury,		1
Peddling without a license,	3	
Passing worthless check,	1	
Runaways,	16	
Robbery,	1	
Receiving stolen property,	1	
Rude and disorderly,	2	
Reckless driving,	1	
Safekeeping,	13	
Selling cigarettes to minor,	2	

	Males	Females
Selling personal property held on conditional sale,	1	
Selling oleomargarine not properly marked,	4	
Selling watered milk,	1	
Stubbornness,	3	
Trespass,	4	
Truancy,	1	
Taking team,	1	
Violation probation,	9	
Violation city ordinances,	3	
Violation milk laws,	1	
Violation boiler inspections laws,	4	
Vagrants,	14	
Violation Board of Health rules,		1
Uttering forged checks,	4	
Unnatural act,	1	
Walking on railroad track,	1	
 Total,	 1491	 40

OCCUPATIONS.

Apprentices, 2; advertiser, 1; agents, 2; awning worker, 1; barbers, 7; beamers, 2; blacksmiths, 16; boilermakers, 10; brakemen, 11; brickmasons, 15; bakers, 6; bottlers, 2; butcher, 1; bootblacks, 2; brick-makers, 4; clock repairer, 1; cooks, 4; carpenters, 55; canvassers, 3; chair-makers, 14; cigar-maker, 1; comb-makers, 20; chefs, 2; conductors, 2; core-makers, 3; clerks, 23; coachmen, 2; contractors, 4; chauffeur, 1; dyer, 1; demonstrator, 1; dresser, 1; drummer, 1; elevator boy, 1; engineers, 5; electricians, 4; farm hand, 1; fruit dealer, 1; farmers, 15; file cutter, 1; filers, 5; foremen, 3; florist, 1; finisher, 1; firemen, 7; gardener, 1; gilder, 1; grinder, 1; gunsmith, 1; gate tender, 1; grocers, 5; horse dealers, 2; hostlers, 18; housekeepers, 20; helpers, 6; hack driver, 1; hatter, 1; hardener, 1; harness makers, 2; ironers, 3; iron workers, 3; jobber, 1; lawyer, 1; liquor dealer, 1; laundrymen, 14; laundress, 1; laborers, 565; loom-fixers, 7; linemen, 4; lumber dealer, 1; lumberman, 1; machine tender, 1; musicians, 2; millwright, 1; mule spinner, 1; meat cutters, 5; melters, 4;

machinists, 40 ; mechanical engineer, 1 ; mill hands, 90 ; motor-men, 3 ; manufacturer, 1 ; moulders, 18 ; managers, 2 ; mason tenders, 4 ; merchants, 3 ; masons, 8 ; no occupation, 60 ; pavers, 3 ; physicians, 2 ; polishers, 7 ; painters, 42 ; paper cutters, 3 ; paper makers, 33 ; paper hanger, 1 ; pedlers, 11 ; piano makers, 9 ; plasterer, 1 ; plumbers, 5 ; printers, 6 ; pistol makers, 5 ; quarrymen, 3 ; reed maker, 1 ; real estate, 9 ; rubber worker, 1 ; roofer, 1 ; restaurant proprietors, 2 ; screw maker, 1 ; shoe cutter, 1 ; superintendent, 1 ; spinners, 8 ; steel worker, 1 ; students, 2 ; sausage maker, 1 ; shoe makers, 24 ; steward, 1 ; slaters, 4 ; shirt makers, 3 ; saw grinder, 1 ; store-keepers, 2 ; stone-masons, 15 ; salesmen, 9 ; saw makers, 2 ; stone cutters, 11 ; steam fitters, 5 ; seaman, 1 ; tinkers, 2 ; telegrapher, 1 ; teamsters, 39 ; tailors, 6 ; tailoress, 1 ; wire drawer, 1 ; waiter, 1 ; weavers, 54 ; wood workers, 4 ; wood choppers, 2 ; well driller, 1 ; wood turners, 8. Total, 1531.

NATIVITY OF PRISONERS.

United States, 664 ; British Provinces, 63 ; Canada, 161 ; Ireland, 118 ; England, 20 ; Finland, 278 ; Greece, 34 ; Italy 58 ; Germany, 22 ; Russia, 27 ; Lithuania, 3 ; Poland, 17 ; France, 8 ; Sweden, 25 ; Scotland, 16 ; Austria, 2 ; Armenia, 3 ; China, 8 ; Albania, 1 ; Japan, 1 ; Sicily, 1 ; Holland, 1. Total, 1531.

DISPOSITION OF CASES.

Appealed,	76
Bound over to Grand Jury,	26
Bailed to appear in other courts,	10
Committed to the House of Correction,	161
Committed to the House of Correction for non-payment of fines,	123
Committed to State Farm,	4
Committed to Worcester State Hospital,	10
Committed to Monson Epileptic Hospital,	1
Committed to Massachusetts Reformatory,	4
Committed to care of State Board of Charity,	7
Committed to Industrial School for Boys, Shirley,	5
Committed to Worcester County Training School;	1

Continued to January 1,	1
Continued to January 7,	1
Case dismissed on account of suicide,	1
Continued, to be sent away,	2
Defaulted,	5
Default removed,	2
Default removed and sentence confirmed,	3
Case pending,	1
Delivered to other officers,	31
Delivered to father,	2
Delivered to the Superior Court,	1
Dismissed,	3
Discharged,	2
Discharged by order of the doctor,	1
Fined and paid,	198
Fined and sentence suspended,	44
House of Correction, sentence suspended,	31
Held for the Superior Court,	1
Massachusetts Reformatory, sentence suspended,	4
Not guilty,	49
On file,	149
On file by payment of costs,	5
On file, delivered to deputy sheriff,	1
Ordered to recognize in sum of \$100 for appearance from time to time,	1
Probation,	129
Released,	416
Returned to Lyman School,	2
Shirley Industrial School, sentence suspended,	5
Sent to Burbank Hospital,	2
State Farm, sentence suspended,	3
Transferred to civil list,	5
Women's Reformatory, Sherborn, sentence suspended,	2
 Total,	 1,531

The following table shows the number of arrests each year for the past five years :

1907	1908	1909	1910	1911	For all offences
947	1,758	1,703	1,691	1,531	For all offences
468	1,077	1,099	1,074	1,020	For drunkenness

MISCELLANEOUS BUSINESS.

Buildings found open and secured, 447; dead body found, 1; defective streets reported, 19; defective sidewalks, 27; defective railings, 13; defective bridges, 9; defective catch basins, 2; defective water gates, 3; dangerous wires, 7; fire alarms given, 4; fires extinguished without alarms, 10; glass reported broken in fire alarm boxes, 5; injured persons assisted, 2; lights reported out in stores, 5; lights found burning in buildings, 29; lost children restored to parents, 15; official letters sent out, 3,672; runaway team stopped, 1; stray teams put up, 5; street lights reported out, 445; safes found open, 2; sublights reported out, 38; Wallace Way lights reported out, 26; water running to waste, 16.

LOCATION OF SIGNAL BOXES.

12. At Union Depot.
13. North and Green streets.
14. Lunenburg and Boutelle streets.
15. Summer and Lunenburg streets.
16. Summer and Goodrich streets.
23. Water and Second streets.
24. Hollow Mill crossing.
25. Bemis street and Duck Mill road.
31. Rollstone and Main streets.
32. Crocker terrace and Mechanic street.
33. Rollstone and Charles streets.
41. Main and River streets.
42. Fairmount and Woodland streets.
43. River street and Oak Hill road.
44. Ashburnham and River streets.

RECORD OF SIGNAL SYSTEM.

Duty calls,	62,780
Telephone calls,	1,827
Red lights used to call officers,	374

WAGON SERVICE.

Number of calls for patrol wagon,	1,412
Number of calls for ambulance,	60
Number of calls for light wagon,	271
Fire alarms responded to,	21
Number of miles covered by patrol wagon,	2,717

PROPERTY REPORTED STOLEN OR LOST AND
AMOUNT RECOVERED.

Value of property reported to the department as lost or stolen,	\$7,412 74
Value of property recovered,	3,913 11

EXPENSES, APPROPRIATIONS AND RECEIPTS.

Expenses of the department for year ending November 30, 1911,	\$42,971 17
Appropriation,	\$36,144 00
Receipts,	6,376 30
Over-draft,	450 87

	\$42,971 17
	\$42,971 17

STATIONS.

Station 1, Elm street. During the past year some repairs and improvements have been made at this station. The small room on the first floor, formerly occupied as an office by the inspectors, has been fitted with closets for the use of the reserve officers. There has been a new hardwood floor laid in the barn, a wash tank put in, and other improvements made.

Needed repairs: The walls of the interior of this station, (with the exception of the office rooms) together with the court room, need painting, the woodwork newly finished, and the ceilings either painted or kalsomined.

Station 2, Cleghorn. The small building at the corner of Kimball and Fairmount streets, rented by the city from Mr. G. C. DesRivieres, now being used as a police station, is not conveniently situated for this purpose. Mr. John H. Daniels, hav-

ing failed to fulfil his part of a contract with the city for the erection of a building at the corner of Allen and Daniels streets, a part of which was to be used as a police station, I would suggest that new quarters be secured somewhere in that vicinity. In my opinion suitable quarters could be secured for one-half the rental the city agreed to pay Mr. Daniels.

Station 3, West Fitchburg. In regard to this station the conditions there are practically the same as they were one year ago. There is need of a new floor in the front or office room. The walls of this room would be greatly benefited by the application of a coat of paint. The sanitary conditions are bad and should be attended to.

CHANGES.

The following changes have taken place in the department during the past year:

Patrolman John J. Dunn, who was appointed a reserve officer May 20, 1902, and appointed a regular officer January 1, 1906, died January 6. Officer Dunn was a veteran of the Spanish War.

Captain Asahel Wheeler, who was appointed a regular officer September 23, 1869, died September 2. Captain Wheeler had served continuously for 42 years, with the exception of three years. He was promoted to captain two years after his first appointment, and with the exception of about four years, served the department as captain during the entire time he was connected with it.

He was a veteran of the Civil War and had a long and enviable record, having enlisted as a private, and was advanced to the rank of captain. Captain Wheeler was a conscientious officer, fearless and honest, and was respected and esteemed both by his comrades and the public as well.

RESERVE OFFICERS APPOINTED REGULAR PATROLMEN.

May 16, James J. Hanley.
 Edward R. Hart.
 Emil Berndt.

October 3, Percy H. Fitzgerald.
 Valentin P. Cormier.

PROMOTIONS.

October 3, Lieutenant John Flood appointed captain.

Sergeant James F. Roy appointed lieutenant.

Patrolman William E. Hackett appointed sergeant.

November 14, Patrolman Thomas J. Godley appointed inspector.

SIGNAL SYSTEM.

This system, when kept in repair, is of great assistance to the department, but practically useless when not properly looked after. Mr. George F. Jefts, Superintendent of Wires, who has had charge of the system since it was installed, states that owing to the fact that practically all of his time is required in looking after the fire alarm system, he finds it impossible to devote the time that should be given to the care of the signal system, consequently, some of the circuits are out of repair a considerable portion of the time. This causes a great deal of inconvenience, therefore, I would suggest that some arrangement be made whereby it will be kept in better repair.

I again repeat the recommendation I made one year ago, that a signal box be placed near the corner of Main and Putnam streets. I would also recommend that a red light connected with this system be placed at the junction of Laurel, Putnam and Cross streets.

VEHICLES.

Our present equipment consists of a combination automobile ambulance and patrol, 2 patrol wagons, 1 democrat wagon, and a pung sleigh. The horse drawn vehicles are in fairly good repair, with the exception of the democrat wagon, which needs painting. The older of the patrol wagons will probably not again be needed by this department, and I would recommend that it be disposed of.

The new Peerless combination automobile ambulance and patrol, purchased for the department, and put in use August 23rd, is in fine repair, and is doing splendid work. Its advantages over the old style horse drawn vehicle are being demonstrated almost daily. In cases of accident, where much depends upon getting a patient to the hospital in the least possible space of time, it is a great improvement over the old style horse drawn ambulance.

A good illustration of this was shown on December 18, when Oscar Sweeney, a 9 year old boy, had both legs cut off by being run over by a train near the Union Depot. Seventeen minutes from the time the call for the ambulance was received the boy was at the hospital, and had it not been necessary to go out of the way to pick up a doctor the run would have been made in even less time.

That there was a call for a combination car of this kind is shown by the fact that between August 23rd, the day it was put in commission, and December 1st, it responded to 456 calls. Fifty-two of these were ambulance calls, and covered a distance of 1,088 miles.

The seemingly large number of ambulance calls is explained by the fact that we did the transferring of the sick for the hospital for five or six weeks while the hospital ambulance was being repaired.

One of the two horses in use by the department at the time of the purchase of the automobile was disposed of by the Committee on Police, the younger horse being kept for light driving, and to answer calls for the patrol wagon when the automobile patrol is not available. This horse is in good condition, and being young, should answer the purposes for which he is used for a number of years.

The difference in cost of maintenance between horse drawn vehicles and the present arrangement is something that cannot be accurately judged at the present time, but, judging from what the expense thus far has been, I should say that, barring accidents, the cost will not be greatly in excess of what it cost to maintain two horses with the vehicles and equipments that were required.

RECOMMENDATIONS.

Five of the reserve officers having been appointed to the regular force during the year reduces the number now connected with the department to six. I would respectfully recommend that four more reserve officers be appointed.

I would also respectfully recommend that a tank for the storage of gasoline for the use in our automobile be provided. I am informed that a suitable tank, which would not be ex-

pensive, could be placed just outside the barn by sinking it in the driveway. By this arrangement there would be a saving in the cost of gasoline of about four cents a gallon, and a good deal of inconvenience would be avoided.

INSPECTOR'S DEPARTMENT.

Inspector Bernard H. Flaherty, who has charge of this department, has been ably assisted during the past year by Inspector Thomas J. Godley, recently appointed to this position, but who during the year previous to his appointment was assigned to this line of work.

As a natural consequence as the population of the city increases the work of this department increases, and it had reached proportions where it was found impossible for one inspector to do justice to the hundreds of cases handled by the department during the year, many of these cases being of a nature that require a great deal of persistent hard work in solving them. The reputation for efficient work enjoyed by this branch of the service in years past has been well maintained during the year.

REMARKS.

I believe that I am justified in saying that the work of the department as a whole has been well performed during the past year. The discipline has been good. The conduct of the officers, with very few exceptions, has been commendable. One patrolman was suspended on April 11 for insubordination and disrespect toward superior officers. On April 21 he was given a hearing before the Mayor and Board of Aldermen, adjudged guilty, and suspended from duty for eleven days with loss of pay, with the understanding that in addition to this he was to be reprimanded by the mayor.

CONCLUSION.

To His Honor, Mayor M. Frederick O'Connell, the members of the City Council, Judge Thomas F. Gallagher, the associate judges, the clerk and probation officer of the Police Court I wish to extend my sincere thanks for the many courtesies shown, and the assistance given me during the past year.

To the ranking officers I desire to again express my appreciation and thanks for the valuable assistance given me in conducting the affairs of the department.

To the patrolmen much credit is also due for the faithful performance of their unpleasant and trying duties.

Respectfully submitted,

A. Q. THAYER,

Chief of Police.

In Memoriam

Patrolman John J. Dunn

Appointed to the Force

May 20, 1902

Died January 6, 1911

Captain Asahel Wheeler

Appointed to the Force

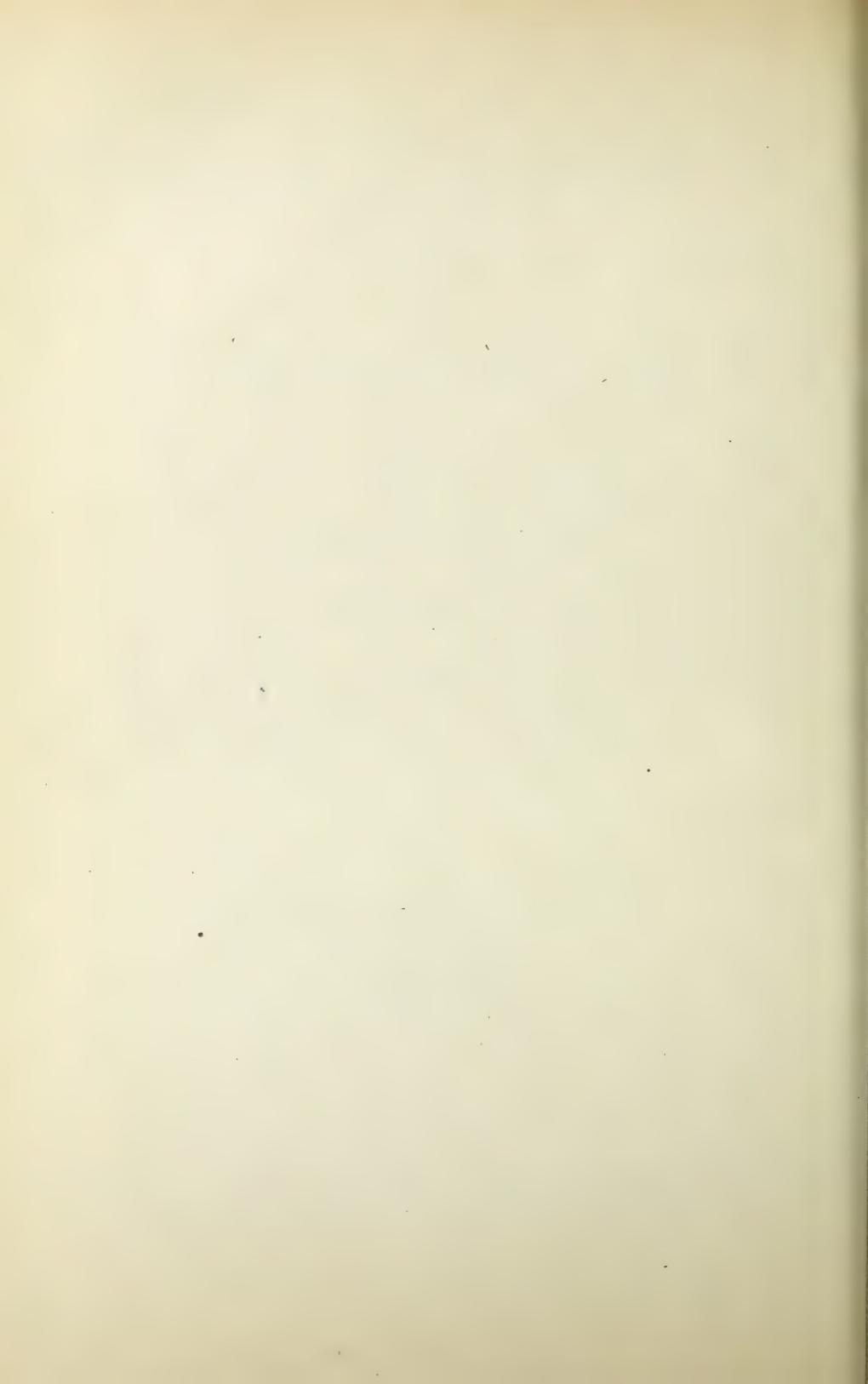
September 23, 1869

Died September 2, 1911

THIRTY-NINTH
ANNUAL REPORT
OF
THE CITY CLERK
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911



ANNUAL REPORT OF THE CITY CLERK

CITY CLERK'S OFFICE,
FITCHBURG, MASS., December 26, 1911.

To the Honorable City Council of the City of Fitchburg:

GENTLEMEN:—The undersigned has the honor of presenting the thirty-ninth annual report of the expenditures and receipts of the City Clerk's office for the year ending November 30, 1911:

EXPENDITURES.

Paid salary of City Clerk,	\$1,500 00
Appropriation, salary list,	\$1,500 00
Stenographer and assistant,	570 00
Clerical assistance,	454 50
Card indexing,	34 60
Copying vital statistics,	76 40
Postage stamps, express, etc.,	86 70
Telephone tolls,	8 15
Supplies, advertising, books and printing blanks,	335 40
	<hr/>
	\$1,565 75
Appropriation,	\$1,500 00
From incidentals,	65 75
	<hr/>
	\$1,565 75

RECEIPTS OF CITY CLERK'S OFFICE BY MONTHS.

December, 1910,	\$73 95
January, 1911,	281 50
February,	93 15
March,	90 55
April,	176 35
May,	896 30

June,	\$211 55
July,	150 00
August,	124 70
September,	97 55
October,	92 00
November,	179 80
	—————
	\$2,467 40
Deposited with City Treasurer,	\$2,467 40

DIVISION OF RECEIPTS.

Received for 419 marriage certificates at \$1 each,	\$419 00
920 dog licenses, (clerk's fees) at 20c. each;	184 00
Recording fees,	220 15
Jobbers' licenses,	88 00
Hack licenses,	10 00
Junk Collectors' licenses,	135 00
Junk shop licenses,	60 00
Intelligence office licenses,	16 00
Auctioneers' licenses,	14 00
Unsecured loans licenses,	30 00
Small loans licenses,	31 25
Pawnbrokers' licenses,	100 00
Bowling alley licenses,	70 00
Billiard and pool table licenses,	550 00
Gasoline licenses,	10 00
Theatre and moving picture licenses,	159 00
Circus licenses,	100 00
Wrestling match licenses,	60 00
Sunday entertainments,	6 00
Dance and whist party licenses,	134 00
Sundry licenses to sell, etc.,	54 00
Ice cream licenses,	17 00
	—————
	\$2,467 40

LICENSES IN DETAIL.

Auctioneers' licenses :

Benjamin N. Cofman,	\$2 00
Frank A. Bagley,	2 00
William S. Bullock,	2 00
Earl H. Farwell,	2 00
Arthur Lafortune,	2 00
Fusanoin Awo,	2 00
Morris Lowis,	2 00

	\$14 00

Intelligence office licenses :

William P. Wallace,	\$2 00
Mrs. C. L. Fox,	2 00
Selma S. Leeman,	2 00
Mrs. D. G. Oxford,	2 00
Mrs. Mary A. Fant,	2 00
Syrjala Brothers,	2 00
Mrs. James J. Phelan,	2 00
George N. Ordung,	2 00

	\$16 00

Pawnbrokers' licenses :

Herman C. Cofman,	\$50 00
Morris Bauman,	50 00

	\$100 00

Small loans licenses :

William P. Dwyer,	\$6 25
A. E. Lyon Company,	25 00

	\$31 25

Unsecured loans licenses :

Empire Loan Company,	\$15 00
A. E. Lyon Company,	15 00

	\$30 00

Billiard and pool table licenses :

Michael J. Kennedy,	\$20 00
Abner Cohan,	5 00
Alexander Tervo,	35 00
Philias Leclerc,	20 00
Albert Capone,	10 00

Ulric P. Mercier,	\$15.00
George A. Cody,	10.00
Frank P. Allen,	25.00
Arthur J. Letellier,	15.00
John D. Espie,	15.00
Andrew Hawthorne,	35.00
John P. McDermott,	15.00
Kelle Pajala,	25.00
Levi J. Lashua,	25.00
Alexander J. L'Ecuyer,	15.00
Joseph B. Molaghan,	25.00
Francis E. McMahon,	25.00
Frank A. Savage,	10.00
Elijah I. Thompson,	25.00
Cerenus Roy,	20.00
Cohen & Berger,	25.00
Louis Goguen,	20.00
Collins & Quigley,	10.00
Alphonse Morin,	15.00
Matti Mikkola,	20.00
A. A. Henrikson,	20.00
Clinton D. Judd,	20.00
Thomas H. Conrad,	15.00
Daniel W. Goulding,	15.00
	—————
	\$550.00

Bowling alley licenses :

Andrew Hawthorne,	\$40.00
Frank A. Savage,	10.00
Cerenus Roy,	20.00
	—————
	\$70.00

Junk collectors' licenses :

Alex Saltzberg,	\$10.00
Vilbon Lafountaine,	5.00
Abel Grossman,	5.00
Sam Feiger,	5.00
Philip Winthrop,	5.00
Simon Winthrop,	5.00
Many Dubinsky,	5.00
Moritz Dubinsky,	5.00

Harris Klebanov,	\$5 00
Max C. Sarkin,	5 00
John B. Dodwell,	5 00
Joseph Goyette,	5 00
E. Butler Bryant,	5 00
William Cohen,	5 00
Harris Winthrop,	5 00
Jacob Borowsky,	10 00
Louis N. Marois,	5 00
Daviss Malchman,	5 00
Barney Fish,	5 00
Abraham Grossman,	5 00
Isaac Flaum,	5 00
John W. Withington,	5 00
Harris N. Salny,	5 00
Abraham Shane,	5 00
Morris Levine,	5 00

	\$135 00

Junk shop licenses :

Jacob Borowsky,	\$30 00
Barnet Cotton,	30 00

	\$60 00

Jobbers' licenses :

John Turunen,	\$1 00
John Shaeffer,	1 00
Frank B. Dyer,	1 00
Charles Lessard,	1 00
Forrest B. Marois,	1 00
Vilbon Lafountaine,	1 00
Arthur H. Hall,	1 00
Lorenzo Curtis,	2 00
Arthur Rousseau,	1 00
Charles F. Hill,	1 00
Smith & Co., express,	2 00
Elwin W. Terrell,	1 00
Theophile Rochon,	1 00
Frank A. Matthews,	1 00
Louis N. Marois,	1 00
Edward Morrill,	1 00

Perry A. Porter,	\$1 00
Martin F. Mongovan,	1 00
Kalle Rantanen,	1 00
Mrs. Gilman Danforth,	1 00
G. E. Waite & Co.,	13 00
Joseph Cournoyer,	1 00
Edward F. Gorman,	1 00
Walter E. Judd,	1 00
Allen H. Clark,	1 50
John B. Dodwell,	1 00
Arthur Lessard,	1 00
George H. Roy,	1 00
Arthur Caron,	1 00
Eugene T. Donahoe,	1 00
Kalle Hintala,	1 00
Joseph Lortie,	1 00
Telesphore H. Croteau,	1 00
Matti Mikkola,	1 00
Kalle P. Tuovinen,	1 00
James Duggan,	1 00
Joseph Desgroselliers,	1 00
Orin W. Delaney,	1 00
John H. Holland,	3 00
Arthur Lafortune,	1 00
Eli Brewer,	1 00
George S. Lord,	1 00
George H. Litchfield,	1 00
Samuel J. Thompson,	2 50
Albert Liloiva,	1 50
Alfred Houle,	1 00
Alphonse Cote,	1 00
New Express Co.,	1 50
John G. Voedisch,	1 00
John W. Withington,	1 00
Giovanni Lunetta,	1 00
Philip Winthrop,	1 00
Ernest L. Collins,	1 00
Adams Express Co.,	2 50
Henry Dupuis,	1 00
Kalle Wilen,	1 00

John J. Quigley,	\$1 00
Harris N. Salny,	1 00
Maurice Tracy,	1 00
Est. W. E. Clapp,	1 50
National Express Co.,	4 00
Ameary Theriault,	1 00
Alfred Ouellette,	1 00
Peter W. Lahti,	1 00

	\$88 00

Hack Licenses :

Frank Laventure,	\$1 00
O. E. Bickford,	3 00
Tower & Willard,	3 50
Joseph Charron,	2 50

	\$10 00

Gasoline Licenses :

Walter A. Hartwell,	\$5 00
George L. Lewis,	5 00

	\$10 00

MISCELLANEOUS LICENSES.**Theatre and Moving Pictures :**

The Nickel, A. Couillard,	\$50 00
Cumings Theatre,	50 00
Bijou Theatre,	50 00
Moving pictures, A. Couillard,	9 00

	\$159 00

Circus Licenses :

Buffalo Bill's Wild West,	\$50 00
Ringling Brothers,	50 00

	\$100 00

Wrestling Match Licenses :

Geo. H. Hill, Manager,	\$5 00
James J. Prokas,	15 00
Waino Ketonen,	5 00
Cumings Theatre,	10 00
Spanish War Veterans,	1 00
Charles H. Lucier, (2)	4 00

Hjalmar Lundin,	\$5 00
W. T. Johnson,	5 00
Ole Oberg,	5 00
Charles E. Hoglund,	5 00

	\$60 00

Ice Cream Licenses :

Konstantino Kotsilibas,	5 00
Charalamyas Parousis,	5 00
H. E. Savageau,	5 00
John Fitzgerald, (1 day)	2 00

	\$17 00

Dance and Card Party Licenses :

Julius A. Johnson,	\$2 00
Kenneth M. Wilson,	4 00
John Tiehaara,	27 00
E. V. Morse Rebekah Lodge,	3 00
A. O. U. W.	2 00
Finnish Young Men's Club,	4 00
John E. Wirtanen,	22 00
Alfonzo Ballazzi,	1 00
Whaloma Council,	1 00
Junior Class, F. H. S.,	1 00
G. H. White,	1 00
I. O. O. F., Manchester Unity,	2 00
Newman Club,	1 00
Plymouth Colony, No. 97, U. O. P. F.,	3 00
Nashua Tribe Redmen,	1 00
Redmen,	1 00
C. A. McAfee,	1 00
St. Bernards Total Abstinence Soc.,	1 00
Baner Lodge, Order of Vasa,	1 00
Clementino Cotelli Co.,	2 00
Bijou Club,	1 00
Y. L. C. U.,	1 00
Nichols & Frost Girls,	1 00
Dozen Americans,	2 00
Pearl Hill Social Circle,	1 00
Lucy E. Wood,	1 00
Saima Salminen,	1 00

Junior Y. P. C. U.,	\$1 00
Yama Yama Club,	1 00
F. H. S., Senior Class,	3 00
Workmen's Benefit,	2 00
Michael P. Burke,	1 00
St. David Society,	1 00
Sanders Lodge, I. O. B. A.,	1 00
John Kiablik,	1 00
Jaanes Wesa,	1 00
Otto Erickson,	3 00
Ralph E. Bull,	6 00
Mount Roulstone Lodge,	2 00
Stockwell & McGee's Orchestra,	1 00
Sterling Club,	2 00
Carl C. King,	1 00
Leon Beauchemin,	1 00
William Muhonen,	1 00
G. W. W. A. Girls,	1 00
B. A. H. Club,	1 00
Haymakers' Asso.,	1 00
Joseph Muraska,	1 00
Pearl Hill Rebekah Lodge,	2 00
Mountain Laurel Division,	1 00
Finnish Rosary Co.,	1 00
Alfred Collette,	2 00
Loyal Progressive Lodge,	2 00
Patrick Hill,	1 00
B. B. S. C. Club,	1 00
Pasquale Lunetta,	1 00
	—
	\$134 00

Sunday Entertainments:

Greek Play, Charles Rodie,	\$2 00
Rev. Anthony Carpinella,	2 00
Thomas P. A. Kelly,	2 00
	—
	\$6 00

Sundry Licenses:

Mrs. E. C. Edwards, read palms,	\$6 00
Pool playing contest,	
Levi J. Lashua,	\$1 00

F. E. McMahon,	\$2 00
Frank P. Allen,	1 00
C. D. Judd,	1 00

	\$5 00
Box and Boomerang Alley, Cerenus	
Roy,	4 00
H. J. Jacobson, gas mantles,	2 00
Marathon walking test, N. A.	
Pearson,	5 00
Shooting gallery, Tony Bizzari,	2 00
Balloon licenses,	10 00
Tropical exhibition, C. Raymond,	2 00
Razzle-Dazzle, J. E. Feehan,	18 00

	\$54 00

Recording fees by months :

December, 1910,	\$17 95
January, 1911,	22 50
February,	13 15
March,	18 80
April,	19 35
May,	21 30
June,	20 55
July,	20 00
August,	24 20
September,	18 55
October,	9 00
November,	14 80

	\$220 15

Number of marriage intentions by months :

December, 1910,	21
January, 1911,	42
February,	28
March,	21
April,	40
May,	32
June,	45
July,	30

August,	33
September,	43
October,	43
November,	41

DOG LICENSES FROM DECEMBER 1, 1910, TO
DECEMBER 1, 1911.

724 males at \$2.00 each,	\$1,448 00
118 females at \$5.00 each,	590 00
78 spayed females at \$2.00 each,	<u>156 00</u>
	\$2,194 00
Paid County Treasurer, June 2, 1911,	\$1,197 00
Dec. 1, 1911,	<u>813 00</u>
	\$2,010 00
Deposited with City Treasurer, clerk's fees :	
June 2, 1911,	\$111 00
Dec. 1, 1911,	<u>73 00</u>
	184 00
	\$2,194 00

HUNTERS' LICENSES FROM JANUARY 1, 1911, TO
DECEMBER 31, 1911.

Received for 605 resident hunters' licenses at \$1.00 each,
\$605.00.

Paid Fish and Game Commission, for 605 licenses at \$1.00 each, \$605.00.

OLD RECORDS.

Volume A of the Old Records of vital statistics has been copied, containing the births, marriages and deaths in Fitchburg as follows:

Births, from May 1, 1843, to December 31, 1859.

Marriages, from May 1, 1844, to December 31, 1851.

Deaths, from May 1, 1844, to December 30, 1855.

There is an appropriation of \$432.90 now on hand, and it is hoped the book will be printed.

Respectfully submitted,

WALTER A. DAVIS.

*DIV. 15,
City Clerk.*



THIRTY-NINTH
ANNUAL REPORT
OF THE
CITY SOLICITOR
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911



REPORT OF CITY SOLICITOR.

FITCHBURG, MASS., December 26, 1911.

To the Honorable City Council of the City of Fitchburg:

GENTLEMEN: — In accordance with Section 8, Chapter II of the Ordinances of 1906, I beg herewith to submit the annual report of the City Solicitor.

CASES PENDING AT THE DATE OF THE LAST ANNUAL REPORT AND DISPOSED OF DURING THE YEAR.

1. Case of Mary Coleman against City of Fitchburg for personal injuries received by reason of a defect in the sidewalk on Day street, settled for one thousand dollars (\$1,000) and agreement for judgment satisfied duly filed in the Superior Court for Worcester County.
2. Petition of Michael Burns for damage to his land on account of the laying out of Charles street extension, settled by the payment of seven hundred and fifty dollars (\$750) and entry of judgment satisfied filed in the Superior Court for Worcester County.
3. Petition of Thomas J. McNamara *et al.* for damage to their land on account of the laying out of Thomas Street Extension, settled for two thousand dollars (\$2,000) and agreement for judgment satisfied, duly filed in the Superior Court for Worcester County.
4. Petition of Russell S. Waters for damage to his land on account of the laying out of Grand street, settled for three hundred dollars (\$300) and agreement for judgment satisfied, duly filed in the Superior Court for Worcester County.

5. Petition of George R. Williams for damages for land taken at Wachusett lake, settled for one thousand and sixty dollars (\$1,060) and agreement for judgment satisfied, duly filed in the Superior Court for Worcester County.

6. Petition of Desire Beaulieu for damages for land taken at Wachusett Lake and conversion of personal property in buildings thereon, settled for one hundred and fifty dollars (\$150) and agreement for judgment satisfied, duly filed in the Superior Court for Worcester County.

7. Petition of George H. Priest, *et al.*, for damages for land taken in connection with the abolition of the Rollstone street grade crossing, settled by the payment of twenty-six thousand dollars (\$26,000) and agreement for judgment satisfied, duly filed in the Superior Court for Worcester County. This sum includes twenty-three thousand, three hundred and fifty dollars (\$23,350) paid as actual damages and the sum of two thousand, six hundred and fifty dollars (\$2,650) for 10,470 square feet of remaining land conveyed by the petitioners to the city.

8. In connection with the last-named case is the claim of the Parkhill Manufacturing Company in which no petition was filed in Court within the time specified in the Grade Crossing Act. Under an Act of the Legislature of 1911, the claimant became legally empowered to bring a petition for land damages. Before this was brought, however, by an agreement between the Commonwealth, the Fitchburg railroad and the City of Fitchburg the sum of four thousand, twenty-three and 87/100 dollars (\$4,023.87) was paid the Parkhill Manufacturing Company and 10,470 square feet of land acquired in the settlement with George H. Priest, *et ali.*, was deeded to it in full settlement of its claim.

9. Petition of Halbert E. Parkhurst, *et al.*, for damages for land taken in connection with the abolition of the Rollstone Street Grade Crossing, settled by the payment of thirteen hundred dollars (\$1,300) and agreement for judgment satisfied, duly filed in the Superior Court for Worcester County.

10. Petition of the Fitchburg Railroad Company for damages for land taken in connection with the abolition of the Rollstone Street grade crossing, settled for the sum of forty-four hundred, ninety-three and 33/100 dollars (\$4,493.33) and agreement for judgment satisfied, duly filed in the Superior Court for Worcester County.

With reference to the payment of the expense of abolishing the grade crossing upon Rollstone street, including payment of land damages by the city, there have been four auditors' hearings. All claims against the city in this matter have been disposed of.

In connection with the petition of Parkhurst, *et al.*, above mentioned, while the railroad has to pay 65% of the cost of grade crossing work and has approved payment of \$1,300 in settlement of all claims for damages, the Commonwealth which pays 25% of said cost has filed an objection thereto. I believe, however, that it will finally approve this settlement.

In the petition of the Gardner, Westminster & Fitchburg Street Railway Company and in the petition of J. S. Ames, both for damages for land taken at Wachusett Lake, hearings lasting five days have been had in the Superior Court before a board of auditors and the evidence closed. It is expected that arguments of counsel will be made before this Board early in January.

CASES PENDING IN COURT AT DATE OF LAST ANNUAL REPORT AND NOT SETTLED.

1. The case of Adrian Marcott, an action of tort in the Police Court to recover for injuries to person and property alleged to have been sustained by a defect in Academy street, near Main street.

2. The case of the City of Worcester, an action of contract in the Superior Court to recover for money expended in caring for a person ill with a contagious disease.

3. The case of Mary Morrill, an action of tort in the Superior Court for injuries to person alleged to have been sustained by reason of a defect in Summer street.

4. A petition in Superior Court of Orin M. Lowe for damages for land taken at Benson street.

5. The case of Catherine Hurley, an action of tort for personal injuries alleged to have been caused by a defect in the sidewalk on Chestnut street.

6. The case of Flora Wood, an action of tort for personal injuries alleged to have been caused by a defect in the sidewalk on Woodland street.

7. The petition of Charles H. Waymouth for damages for land taken at Wachusett Lake.

8. The case of the New York, New Haven & Hartford Railroad Co., a petition for damages for land taken in laying out Benson street.

9. The case of Mary McCarthy, an action of tort for personal injuries alleged to have been caused by a defect in the sidewalk on Nashua street.

10. The case of Bridget Conroy, an action of tort for personal injuries alleged to have been caused by a defect in the sidewalk on Walnut street.

11. The case of Frank G. Phelps, an action of tort for personal injuries alleged to have been caused by a defect in the sidewalk on River street.

12. The petition of Henry T. Page for damage to his land on account of the extension of Fifth street.

13. The petition of Wheelwright Paper Company for damage to its land on account of the extension of Fifth street.

In addition to handling the above matters I have performed the usual duties of the City Solicitor in conferring with the various departments of the city upon their request and in advising them in such matters as they presented to me.

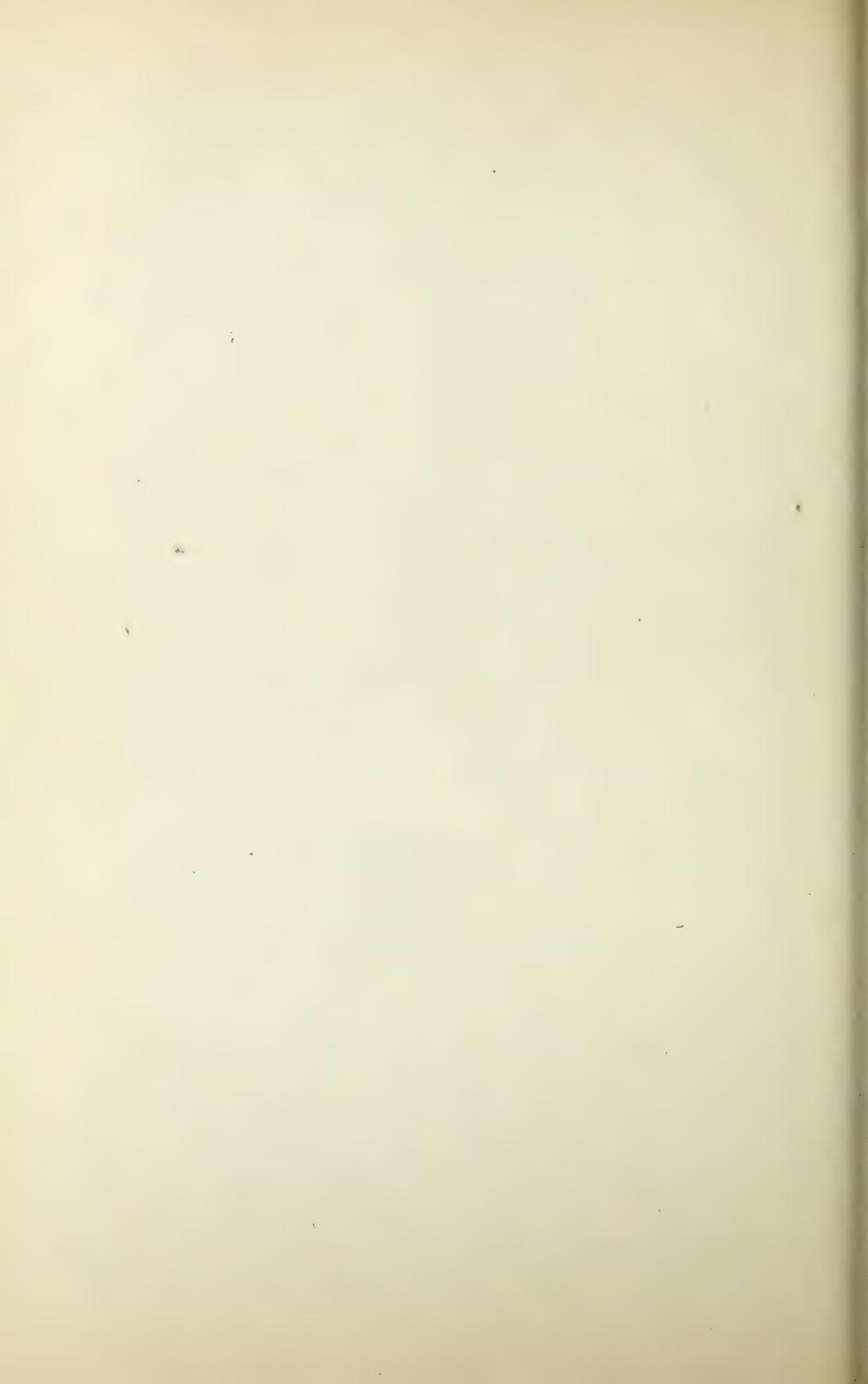
Respectfully submitted,

JOHN F. McGRATH,
City Solicitor.

ANNUAL REPORT
OF THE
CITY MESSENGER
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912



REPORT OF CITY MESSENGER

FITCHBURG, MASS., December 1, 1911.

To His Honor, the Mayor, and the City Council:

GENTLEMEN: — In accordance with the City Ordinance, I submit herewith my seventh annual report, as City Messenger, and thirty-sixth year as janitor of the City Hall building. The duties of this department have been performed as prescribed in the City Ordinances, by delivering notices of special meetings of the City Government, and notices of hearings upon matters pertaining to streets, sewers and sidewalks, and in addition I have delivered state notices for the Massachusetts Civil Service examinations. The number of notices delivered this year have been double the number of last year.

All monies received from societies, organizations and individuals for the use of Assembly Hall, and all other sources have been deposited with the City Treasurer. The receipts have been as follows:

RECEIVED ON ACCOUNT OF RENT OF CITY HALL December, 1910, to December, 1911.

1910.

Dec. 1.	Smith College Girls Club concert,	\$35 00
	Use of Council Room,	6 00
Dec. 5.	Wholesale & Retail Liquor Dealers' Association,	35 00
Dec. 7.	Fitchburg & Leominster Street Railway Relief Association,	40 00
Dec. 16.	Fitchburg Police Relief Asso- ciation,	35 00

Dec. 18.	Ministers' Association Memorial service (Tolstoi) free use by vote of Committee on City Property,	
Dec. 30.	E. A. Smith, Division No.146, O. R. C.,annual concert and ball,	\$50 00
		<u> </u>
		\$201 00

1911.

Jan. 4.	Shakespeare club—free by vote of Committee on City Property.	
Jan. 18.	Fitchburg Fireman's Relief Association,	\$40 00
Jan. 25.	Brotherhood of Railway Clerks' Association,	40 00
		<u> </u>
Feb. 1.	Choral Society rehearsal,	\$7 50
Feb. 1.	Choral Society concert,	35 00
Feb. 3.	Clan Leslie, No. 131, O. S. C. dance,	45 00
Feb. 13.	Shakespeare club—free by vote of Committee on City Property.	
Feb. 17.	Fitchburg Y. M. C. A. (Lyman Howe)	35 00
Feb. 22.	Bartenders' Union, No. 97, dance,	40 00
Feb. 24.	Annual Charity party (Unitarian)	40 00
Feb. 24.	Annual Charity party, use of Council room,	6 00
Feb. 27.	St. Vincent de Paul conference,	35 00
		<u> </u>
		\$243 50

Mar. 14.	Shakespeare club—free by vote of Committee on City Prop- erty.	
Mar. 24.	Universalist Sunday School, childrens' party,	\$35 00
Mar. 24.	Universalist Sunday School, use Council room,	6 00
Mar. 28.	Mayor M. Fred O'Connell,	15 00
		—————
		\$56 00
Apr. 10.	Shakespeare club — free by vote of Commitee on City Property.	
Apr. 17.	Court City of Fitchburg, No. 39, F. of A.,	\$40 00
Apr. 21.	Fitchburg Military band, annual dance,	40 00
Apr. 25.	Fraternal Order of Eagles, Ærie No. 448,	40 00
Apr. 27.	Mt. Roulstone & Apollo Lodges, I. O. O. F.,	40 00
		—————
		\$160 00
May 4.	Grand Patriarchs Militant ball,	\$40 00
May 24.	Orswell Mills use of twelve chairs,	25
May 25.	Fitchburg Choral Society,	35 00
May 26.	Fitchburg Choral Society, matinee,	17 50
May 26.	Fitchburg Choral Society, concert (evening)	35 00
May 30.	E. V. Sumner Post, No. 19, G. A. R.,	10 00
		—————
		\$137 75
Aug. 31.	Childrens' playground festi- val, afternoon — free by vote of City Council.	
Oct. 27.	Y. M. C. A., Lyman Howe's moving pictures,	\$35 00

Oct. 31.	First Church of Christ, Scientist,	\$35 00
		— — —
Nov. 2.	Democratic rally (unpaid).	\$70 00
	Total receipts,	\$948 25

The expenditures have been as follows:

Salary of City Messenger,	\$800 00
John Couch, for labor,	602 11
Peter Gerow, for labor,	11 23
Edward B. Curtis, for labor,	24 03
Pay roll for cleaning City Hall building, for the year 1911,	456 94
Fitchburg police department, for services,	38 50
Sundry supplies,	7 78
F. S. Wadleigh, for glass, paint and labor,	3 25
House Savogram cleaning powder,	14 76
Fuller Hardware Co., one 18-inch duster,	2 90
	— — —
Total expenditures,	\$1,961 50

Expenditures in excess of receipts, \$1,013 25

Loss in rental allowed free by vote of City Property Committee, \$192.50.

With the exception of the year when the hall was being remodelled the annual rental has never fallen so low.

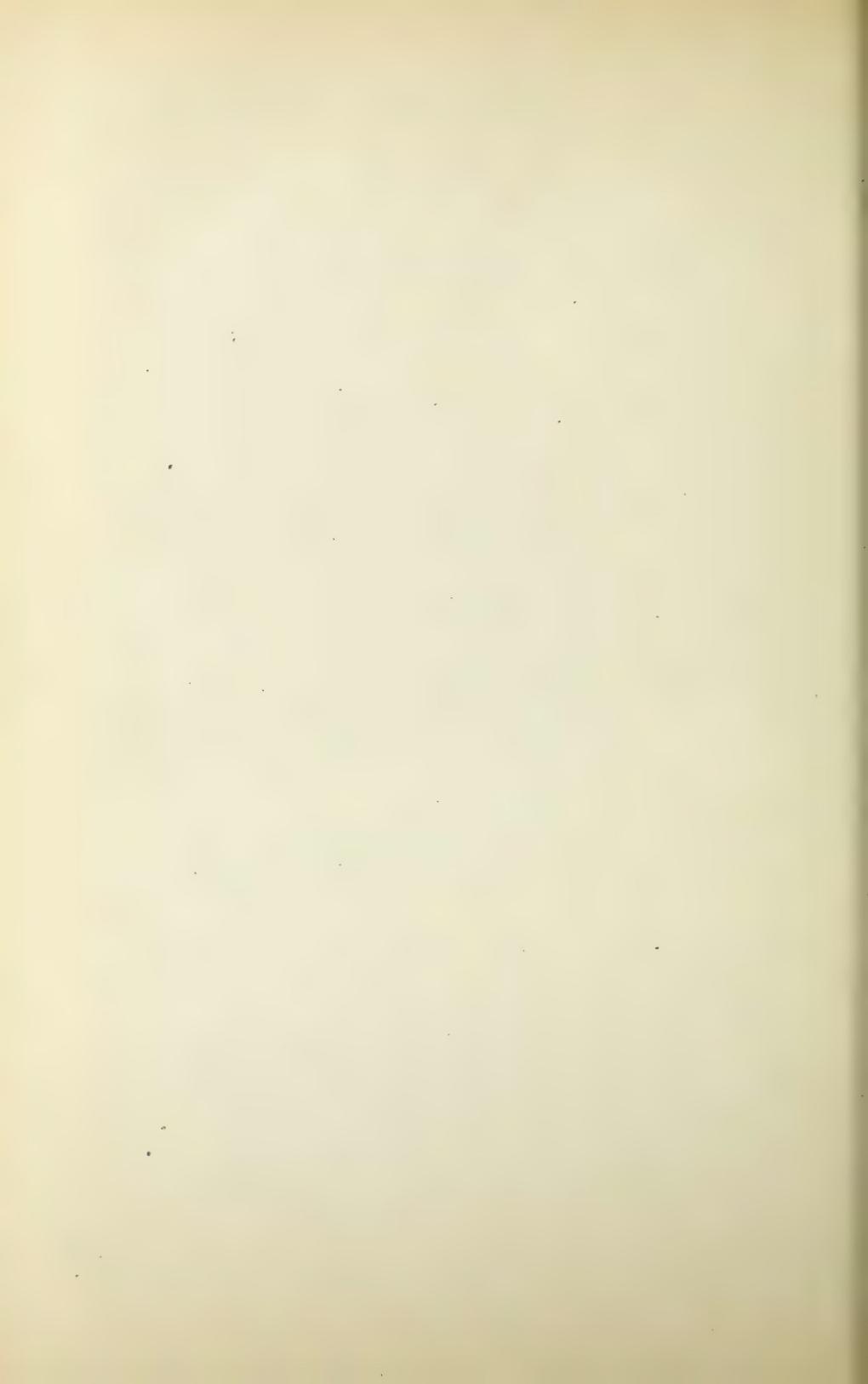
The receipts for rental of Assembly Hall have been reduced, as free use has been given on many occasions making a loss to the city of one hundred, ninety-two dollars and fifty cents. The expense of care and cleaning has been slightly increased over that of last year, the amount being sixty dollars and seventy-seven cents; this has been occasioned by the increase in the pay of the help employed to work in the building.

The expense of cleaning City Hall building has been as follows:

For Assembly Hall,	\$106 40
Public Comfort Station,	109 19
Offices and corridors,	164 42
Common Council and committee rooms caucuses, conventions, registration and election,	76 93
Total,	\$456 94

The Public Comfort Station is a great convenience to the general public, and that it is appreciated is indicated by the constant increase in its use by both men and women. I do urge that a permanent man should be employed for that position. The Station has been remodelled and is much more convenient than when first opened and is kept open to the public seventeen hours each day seven days in the week. With the help of the police I have been able to keep it fairly clean, but there have been times during the year when the furnishings have been damaged to such an extent that it was necessary that it should be closed for a short time for repairs. Owing to these circumstances I think there should be a permanent man employed for the position, and trust you will give this matter your earliest consideration.

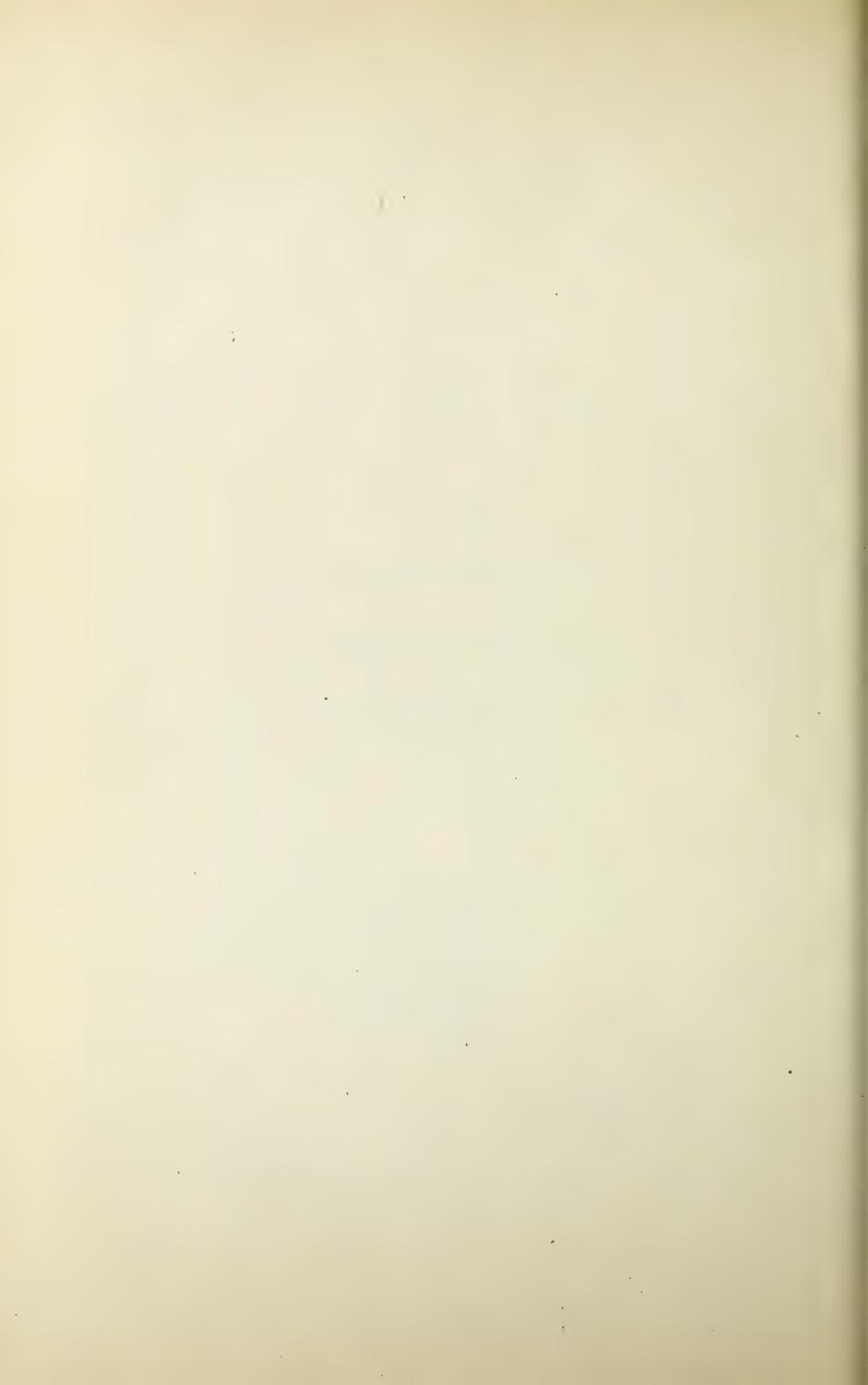
Respectfully submitted,
CHARLES T. CUSHING,
City Messenger.



ANNUAL REPORT
OF THE
AGENT FOR
SOLDIERS' RELIEF
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912



REPORT OF AGENT FOR SOLDIERS' RELIEF

To His Honor, the Mayor, and Board of Aldermen of the City of Fitchburg:

GENTLEMEN:— I have the honor to submit the following report of relief rendered to soldiers, sailors and their dependent relatives during the financial year ending November 30, 1911, in accordance with the provisions of Sections 18 and 19, Chapter 79, of the Revised Laws.

The number of persons assisted during the year was seventy-eight, twenty-five males and fifty-three females.

The total amount disbursed was \$8,467.70, of which \$88.00 has been returned to the city, leaving the cost to the city, \$8,379.70.

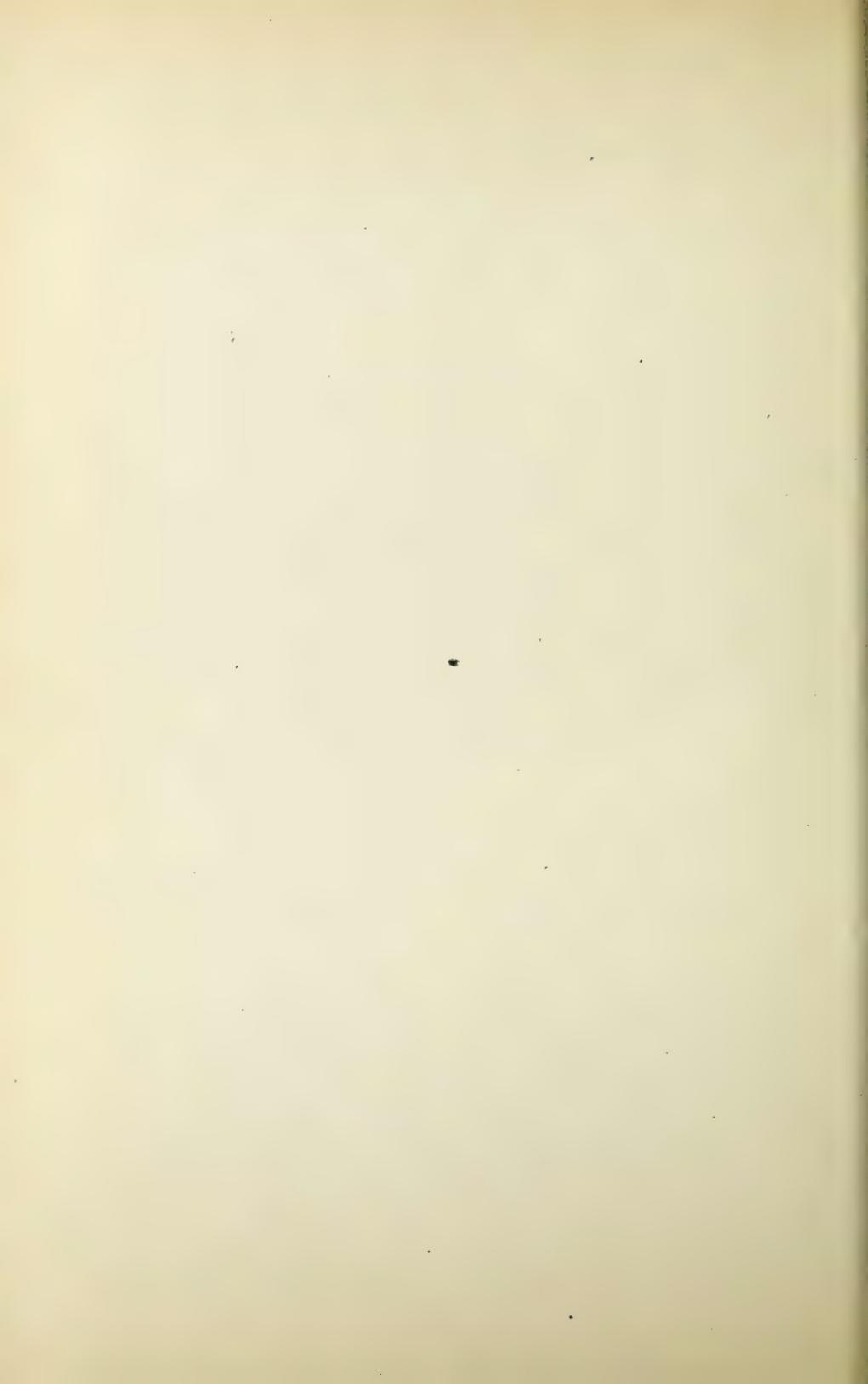
RECEIPTS AND EXPENDITURES.

Appropriation,	\$8,200 00
Returned,	88 00
Overdraft,	179 70

	\$8,467 70
Paid twenty-five males,	\$2,396 00
Fifty-three females,	4,833 00
Care of sick,	495 77
For medicines,	184 60
Groceries and provisions,	98 00
Fuel,	242 54
Printing,	7 75
Repairs to wheel chair,	6 80
Sundries,	3 24
Salary of Agent,	200 00

	\$8,467 70

Respectfully submitted,
SIDNEY SIBLEY, *Agent.*



ANNUAL REPORT
OF THE
TRUSTEES OF
PUBLIC BURIAL GROUNDS

OF THE
CITY OF FITCHBURG
MASSACHUSETTS

1911



FITCHBURG:
H. M. DOWNS PRINTING CO.

1912



REPORT OF TRUSTEES OF PUBLIC BURIAL GROUNDS

FITCHBURG, MASS., December 22, 1911.

To His Honor, the Mayor, and the City Council:

GENTLEMEN:—The Trustees of the Public Burial Grounds herewith submit their twenty-seventh annual report, showing receipts and expenditures of 1911. The Laurel street retaining wall above the upper entrance to Laurel Hill cemetery, which was commenced last year, has been completed, and the side hill has been terraced, loamed and tured, and is now in a very satisfactory condition. The cost of labor, loam and turf for the work on the side hill has been paid out of the general fund of the department without calling for any special appropriation. The old picket fence between the two entrances to this cemetery being in a very dilapidated condition, it was decided after consultation with His Honor, the Mayor, to replace the same with a substantial stone wall, thereby making a continuous stone wall the entire length of the Laurel street front. More than half of this last section has just been completed, and it is the intention of the trustees to complete this work in the spring, for which a small special appropriation will be required. The completion of this work will add very much to the appearance of the Laurel street side of this cemetery. A new fence has been built on the southwest line of the South street cemetery, replacing one which the elements had nearly destroyed. At Forest Hill cemetery a large amount of work has been done clearing new ground and preparing a portion of the same ready for occupancy.

FINANCIAL STATEMENT.

RECEIPTS.

From balance last report,	\$66 03
Appropriation,	2,000 00
Interest on trust funds,	1,561 25
Sale of lots,	1,550 00
Grading lots,	500 00
Annual care and interments,	4,050 29
	—————
	\$9,727 57

EXPENDITURES.

Paid bills due last report,	\$50 00
Labor and teaming,	8,069 21
Loam and turf,	864 66
Plants and flowers,	81 00
Repairing tools,	21 98
Postage,	12 00
Telephone,	61 78
Fertilizer,	118 80
Printing,	8 00
Supplies,	264 48
Material for new fence at South street cemetery,	93 95
Balance unexpended,	81 71
	—————
	\$9,727 57
Expended on account of Laurel street, retaining wall,	\$1,169 20
There are bills due the department,	\$2,499 72
There are bills payable,	50 00
Expended for care of endowed lots,	1,561 25

Respectfully submitted,

HENRY O. PUTNAM,
ALBERT G. LIVERSAGE,
IRA G. WILKINS,

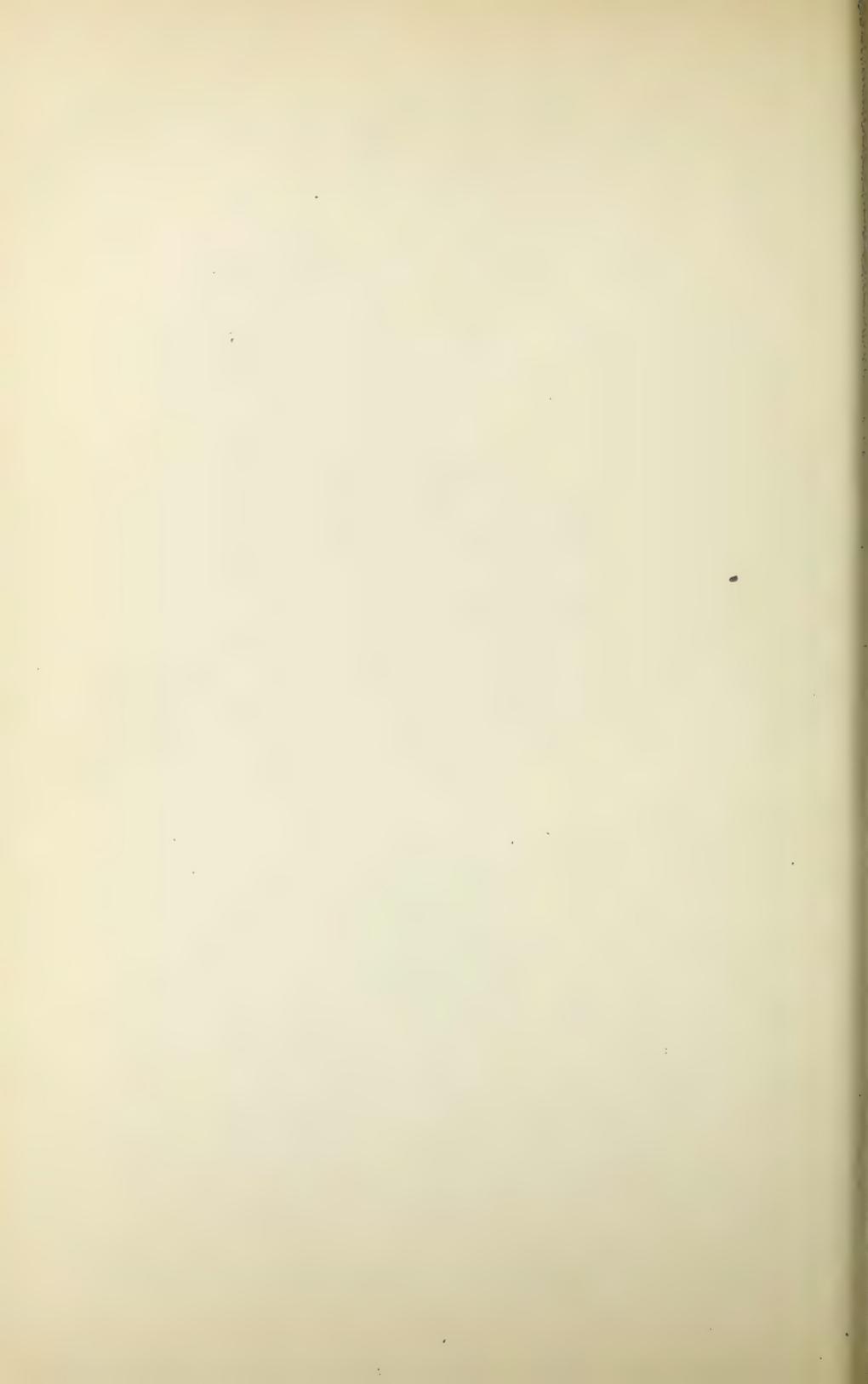
Trustees of the Public Burial Grounds.

ANNUAL REPORT
OF THE
AGENT OF THE
BOARD OF ALDERMEN
OF THE
CITY OF FITCHBURG
MASSACHUSETTS

1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911



REPORT OF AGENT OF THE BOARD OF ALDERMEN

FITCHBURG, MASS., Dec. 15, 1911.

To His Honor, the Mayor, and the City Council:

GENTLEMEN:—As Agent of your Honorable Board for the burial of soldiers, sailors, or marines, and their wives, widows, and dependent mothers, under Chapter 361, Acts of 1904, Sections 17, 18 and 19, I herewith submit the following report for 1911:

Number of veterans of the Civil War buried during the year,	1
Number of veterans of the Spanish War buried during the year,	1

Respectfully submitted,
IRA G. WILKINS, *Burial Agent.*



ANNUAL REPORT
OF THE
BOARD OF ASSESSORS
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912



REPORT OF BOARD OF ASSESSORS

FITCHBURG, MASS., Dec. 20, 1911.

To His Honor, the Mayor, and the City Council :

GENTLEMEN:—The Board of Assessors herewith submit their annual report for 1911, showing receipts and expenditures:

RECEIPTS.

From appropriation,	\$800 00
Expenditures as per report of City	
Auditor,	\$784 71
Balance unexpended,	15 29
	—————
	\$800 00

Respectfully submitted,

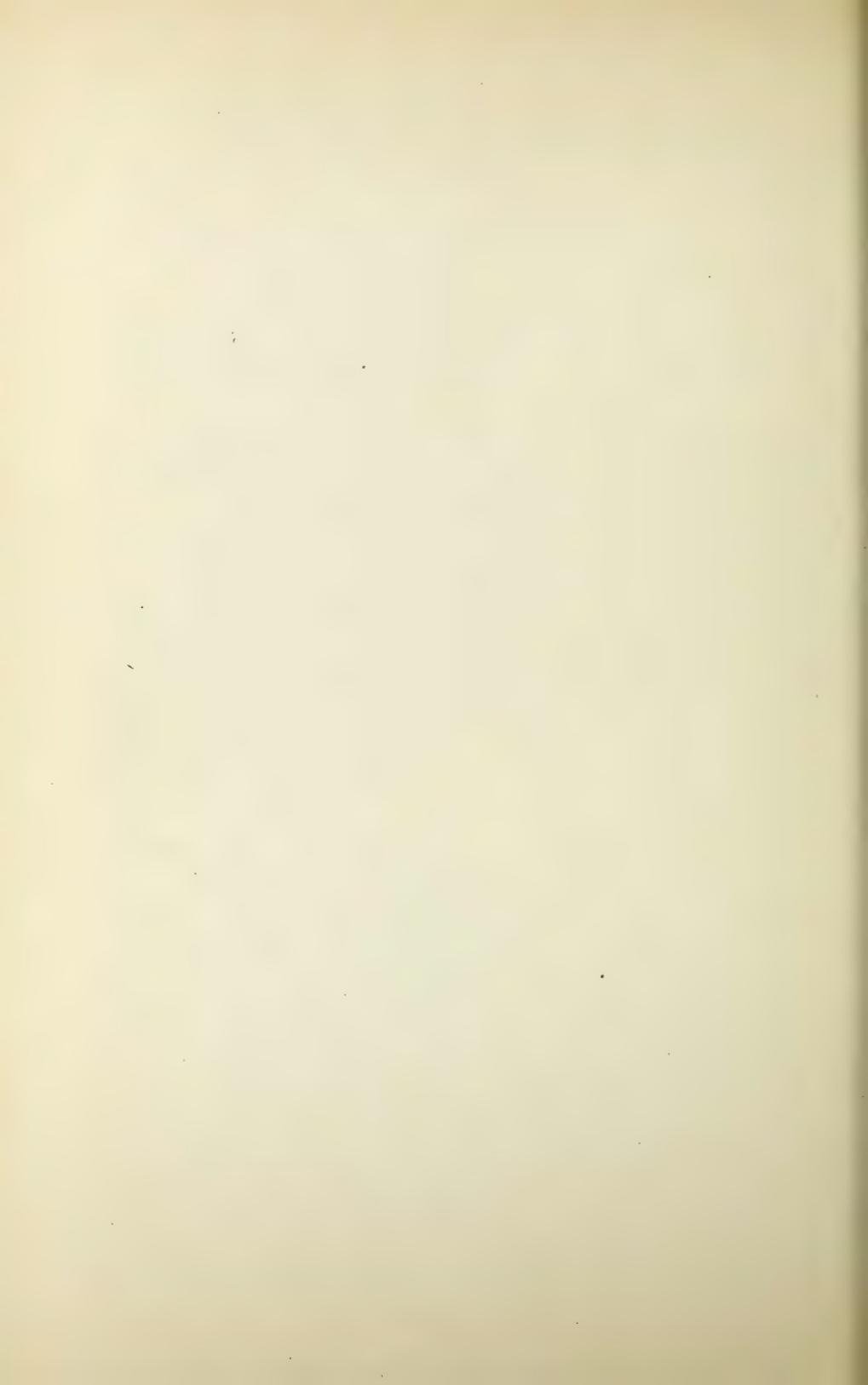
HORACE M. FLYNN,
IRA G. WILKINS,
CHARLES H. MORSE,
Board of Assessors.



ANNUAL REPORT
OF THE
SEALER OF
WEIGHTS AND MEASURES
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG :
H. M. DOWNS PRINTING CO.
1912



REPORT OF THE SEALER OF WEIGHTS AND MEASURES.

OFFICE OF THE CITY SEALER,
FITCHBURG, MASS., Dec. 1, 1911.

To His Honor, the Mayor, and the City Council of the City of Fitchburg :

GENTLEMEN:—In compliance with the City Ordinances I herewith submit, for your consideration, the annual report of the Weights and Measures Department for the year ending November 15, 1911.

	Sealed	Condemned
Platform scales over 5,000 lbs.,	24	
Platform scales under 5,000 lbs.,	350	
Computing scales,	114	1
Slot weighing scales;	10	2
All other scales,	536	19
Weights,	2,069	
Dry measures,	220	4
Liquid measures,	307	2
Milk jars, taken from wagons,	346	
Linear measures,	52	1
Pumps,	20	2
Measuring machines,	3	
	—	—
	4,051	31

Total fees collected, and deposited with City Treasurer on December 9th, 1911, \$297.25.

Test weighing of commodities in stores,	497
Inspections of measures and milk jars on wagons,	60
Inspections of junk dealers' scales, etc.,	80

A number of complaints have been made to this department but in no instance was the party making the complaint willing to have the same brought to the attention of the Courts.

Several inspections have been made throughout the city during the past year by the State Department of Weights and Measures, but so far as I know nothing warranted prosecutions until the six complaints against local merchants now pending found on their last visit during the present month. In practically all of the cases which warranted their being brought into court the Inspectors found that these dealers were using a liquid measure instead of a dry measure.

The State Department are requiring more rigid enforcement of the Weights and Measures laws, necessitating double the work on the individual Sealers.

It is the intention of this department to work in harmony with the State Officers in so far as it is practicable, and during the coming year more time will be given to inspections. The local department is handicapped in some cases from the fact that the City Sealer is known to about every merchant, while in the case of the State Inspectors they are strangers.

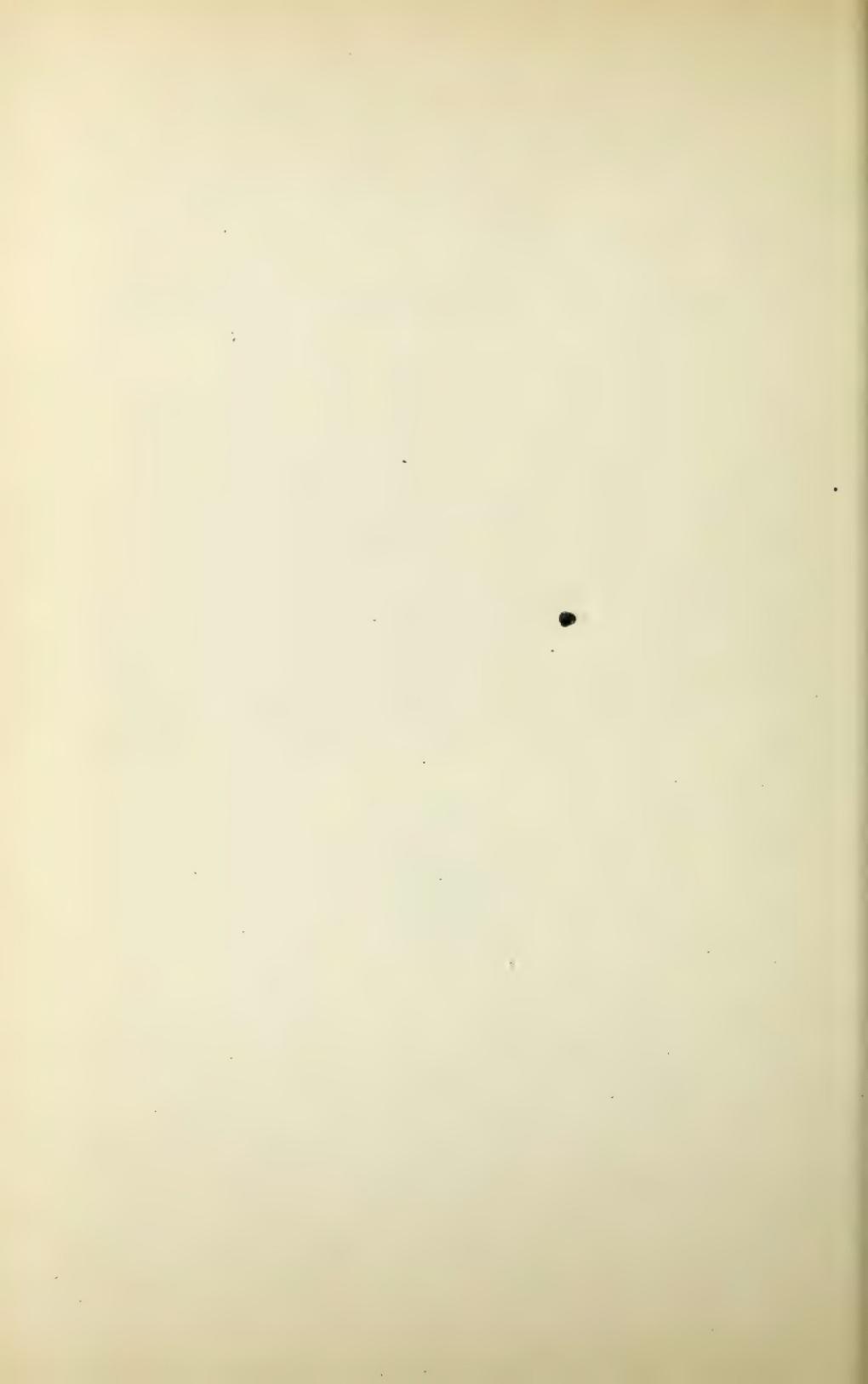
Respectfully submitted,

JAMES A. SHEA,
City Sealer.

ANNUAL REPORT
OF THE
LICENSE COMMISSIONERS
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1912



REPORT OF LICENSE COMMISSIONERS

FITCHBURG, MASS., December, 1911.

To His Honor, the Mayor:

For the year ending December 1, 1911, the Board of License Commissioners have to report that 79 meetings have been held by the Board and frequent unannounced inspection visits have been made by the members of the Board to all licensed premises, and at all times they have endeavored to keep well advised as to existing conditions and conduct of all licensed places. There has only been one complaint brought before the Board during the year for violation of the license conditions, which resulted in a suspension of the fourth-class license for a term of nine days. Licensees have generally showed a readiness to promptly remedy any deficiencies noticed and adopt such improvements as were suggested by the Board. The enactment of "the Bar and Bottle law," so called, resulted in quite a change in license conditions in this city—the fees for liquor licenses were fixed for the year as follows: \$2,000 for first-class, to innholders, the Board continuing the policy of many years of not granting any fourth-class licenses to hotels, although the law makes it permissive so to do, if deemed best.

\$1,500 for retail, first-class license, to common victuallers.

\$2,000 for wholesalers fourth-class license.

\$300 for special club licenses.

\$1 for sixth-class for druggists.

By authority of Acts of 1910, commencing May 1, 1911, a fee was charged for common victualler licenses, \$2 being charged for holders of first-class liquor licenses and \$5 for lunch rooms and restaurants without liquor license. These funds all go into the City Treasury—the state receiving no part of these fees.

The city's revenue from these has been \$192.

The recording fees for recording liquor licenses have been \$58.00.

There have been granted for the year:

3 innholders licenses.

56 common victuallers licenses and liquor licenses as follows:

2 innholders, first-class.

16 common victuallers, first-class.

10 wholesalers, fourth-class.

5 special club licenses.

25 druggists, sixth-class.

Total fees received:

Liquor licenses,	\$49,525 00
Common victuallers,	192 00
Registry fees,	58 00
	<hr/>
	\$49,775 00
25% to state,	12,381 00
	<hr/>
Net to city,	\$37,394 00

Expenses of Board:

Salaries,	\$700 00
Office expenses, including printing and supplies,	334 85
Inspection expenses,	90 75
	<hr/>
	\$1,125 60

Respectfully submitted,

F. A. CURRIER,

P. J. MURRAY,

J. E. DWYER,

Board of License Commissioners.

SECOND
SEMI-ANNUAL REPORT
OF THE
SEWAGE
DISPOSAL COMMISSION
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG :
H. M. DOWNS PRINTING CO.
1912



SEWAGE DISPOSAL COMMISSION

352 Main Street.

FITCHBURG, MASS., July, 1911.

To the Honorable City Council:

The Sewage Disposal Commission, established under provisions of Chapter 461 of the Acts of the year 1910, respectfully presents the following report, giving an account of its doings, receipts and expenditures for the six months ending June 30, 1911, such report being its second semi-annual report.

I. ORGANIZATION.

There has been no change in the membership or organization of the Board during the past six months, the membership being Arthur H. Lowe, chairman, David M. Dillon and Daniel A. Boyle. David A. Hartwell has continued to act as clerk of the Board. Edith M. Whittemore has acted as stenographer and bookkeeper.

The consulting engineer of the Board is Harrison P. Eddy of Boston, who is called upon from time to time as conditions arise which require his services.

David A. Hartwell, the chief engineer, not only acts as chief engineer of the improved sewer system but also has charge of the maintenance of the present sewer system and the construction of such extensions as may be ordered from time to time by the Board of Mayor and Aldermen.

Albertus M. Jackson, for many years superintendent of streets and sewers in Leominster, has been appointed assistant superintendent and he has charge, under the chief engineer, of the day labor force on all maintenance and construction work.

Albert J. Holmes has been appointed principal office assistant in charge of drafting, and Gordon H. Fernald and Ernest E. Lothrop have been appointed assistant engineers in charge of field parties.

II. DEPARTMENT YARD.

In order to properly and efficiently carry on the work required of the commission it was early determined that it would be necessary to have a storage yard with properly planned buildings with a railroad connection. It was also desirable to have such a lot centrally located relative to the whole work to be done by the commission. After an investigation of all lots of land that would be at all feasible for this service it was decided that the Walker lot on Water street was the best of all. Negotiations were entered into with Charles C. Walker, the owner of the lot, and a price of twenty-five cents per square foot agreed upon. This agreement and purchase of land was approved and authorized by vote of the City Council, and a transfer of the lot has been made to the city and payment made for the same to the amount of \$12,245.25. This lot is a triangular shaped piece of land having a frontage on Water street of 593 feet, a frontage on the New York, New Haven & Hartford railroad of about 590 feet and the depth of the lot at the northerly end is about 180 feet. The area of the lot is 48,981 square feet.

Arrangements have been made for the construction of a side track on this lot, the track to have a capacity of four cars.

A limited use of this lot is already being made, using the existing buildings. It is hoped that in the near future definite plans for permanent buildings will have been made with the expectation that these buildings may be erected at an early date.

III. DISPOSAL.

Under authority of an order adopted by the City Council the commission has filed in the registry of deeds a taking of nine separate parcels of land situated partly in Lunenburg and partly in Fitchburg and adjoining the Leominster town line. These areas are as follows :

- | | |
|--|------------|
| 1. Fitchburg Railroad Company, in Lunenburg, | 19.9 acres |
| 2. Fitchburg Railroad Company, in Fitchburg, | 27.1 acres |
| 3. Arthur H. Lowe, in Fitchburg, | 6.5 acres |
| 4. Rowena N. J. Goodridge, in Fitchburg, | 9.9 acres |
| 5. Orin M. Lowe, in Fitchburg, | 20.2 acres |

6. Porter W. Lowe, in Fitchburg,	8.9 acres
7. Consolidated Rendering Co., in Fitchburg,	.11 acres
8. Estate of Ellen D. Benson, in Fitchburg,	23.3 acres
9. Ownership unknown, in Fitchburg,	.76 acres
Total,	116.67 acres

This land is very favorable for sewage disposal purposes, both by reason of having a large area of comparatively uniform elevation upon which filter beds can be easily constructed and also having a large amount of material naturally very well fitted for filtration purposes. Surveys and levels are being made of this area so that if deemed advisable detail plans may be made during the coming winter of the proposed filter beds and additional disposal works. An agreement has been reached relative to settlement of the cost of a portion of this land, and negotiations are being made looking to an agreement with other former owners.

IV. MAIN INTERCEPTING SEWER.

The chief engineer and consulting engineer have spent a large amount of time during the winter and early spring, investigating the probabilities of the future development of the city along the lines of increased population and manufacturing and the proper distribution of the same over all the territory tributary to the proposed main intercepting sewer. As a result of these studies it was determined that with the minimum grade advisable for this main sewer the largest diameter required would be 48 inches. Having determined some of the fundamental data upon which the whole problem would be based active work was at once started to prepare plans and specifications for a section of the main sewer in order to advertise for proposals. It seemed advisable to construct the first section between Putnam street and the river near the Dillon Steam Boiler Works. As rapidly as possible surveys were made and plans drafted for this section which is known as Section 3, covering a distance of 2,927 feet. This sewer is to be 45 inches in diameter. The location is almost wholly on private land or in private passways. Proposals for construction of this section were advertised June 22 to be received July 11.

Takings of easements for the purpose of constructing and maintaining Section 3 of the main intercepting sewer in private land or in passways as authorized by vote of the City Council have been filed in the registry of deeds. These easements are taken for a width of 30 feet unless conditions are such that it is deemed advisable to take a less width.

Work on the surveys and plans of Section 2, from a point near the Dillon Steam Boiler Works to a point near the mill of the American Woolen Co., is being pushed as rapidly as possible with the expectation that proposals for this section may be received by the middle of August.

V. EXPENDITURES. IMPROVED SEWER SYSTEM.

For the six months ending June 30, 1911, your commissioners have expended the sums indicated in the following table under the various subdivisions, which table also shows the total amount spent in this account to June 30, 1911.

GENERAL CHARACTER OF EXPENDITURES	For six months ending June 30, 1911	From beginning of work to June 30, 1911
General work applicable to all divisions of Improved Sewer System.		
Administration,	\$338 40	\$486 45
Stenographer and Bookkeeper,	288 00	336 00
Stationery, printing, stamps,	253 31	321 04
Telephone and express,	54 17	64 15
Traveling,	104 42	120 27
Furniture and fixtures,	874 98	1,727 71
Rent, light and care of rooms,	343 35	462 55
Books and maps,	28 50	71 85
Miscellaneous,	6 00	8 55
	<u>\$2,291 13</u>	<u>\$3,598 67</u>
Department yard.		
Repairing buildings,	112 57	112 57
Walker lot,	12,245 25	12,245 25
Side track at Walker lot,	<u>1,080 00</u>	<u>1,080 00</u>
	<u>\$13,437 82</u>	<u>\$13,437 82</u>
	<u>\$15,728 95</u>	<u>\$17,036 49</u>
Engineering.		
Chief Engineer,	\$761 40	\$803 70
Assistant engineers and draftsmen,	2,443 08	2,563 08
Transportation,	84 25	84 25
Engineering and drafting tools and supplies	1,092 37	1,285 12
Books and maps,	39 00	39 00
City Engineering Department (surveys)		122 85
Parker, Bateman & Chase, (surveys),	60 02	60 02
Miscellaneous supplies,		33 75
	<u>\$1,480 12</u>	<u>\$4,991 77</u>
Main Intercepting Sewer.		
Wash borings,	\$496 72	\$496 72
Advertising,	50 40	50 40
	<u>\$547 12</u>	<u>\$547 12</u>
Disposal.		
Land purchases,	\$902 58	\$902 58
	<u>\$902 58</u>	<u>\$902 58</u>
Totals,	<u>\$21,658 77</u>	<u>\$23,477 96</u>

RECEIPTS.

Fitchburg Water Works (plans)	\$4 00
Fitchburg Savings bank, (fixtures)	42 89
New York, New Haven & Hartford railroad,	2 00
	<u>—————</u>
	\$48 89

SEWER MAINTENANCE.

Chapter 461 of the Acts of 1910 states that the Sewage Disposal Commission shall have charge of the construction, maintenance and repair of all drains and sewers. Your commission was not organized so as to assume the maintenance of the sewer system until May 1. In the meantime at the request of the commissioners the street commissioners continued caring for the sewer system, which work had been done by them for the past eleven years. During the month of April the street commissioners were notified that the sewage disposal commissioners would assume charge of this work May 1, and for the last two months this work has been carried on by your commissioners.

During these two months every catch-basin in the city has been thoroughly cleaned and in a number of catch-basins new traps were placed as the old traps were so badly broken that they failed to perform their functions as a trap. There are a large number of catch-basins that need some minor repairs, and it is the purpose of the commission so far as funds are available for this work to make any necessary repairs in catch-basins so that they may be in first-class condition. A systematic inspection of the whole sewer system is being made so that there will be reasonable assurance that there is no stoppage of any of the sewers.

The following table shows the receipts and expenditures under this division and they cover a period of seven months; from December 1 to May 1 under the control of the street department, and from May 1 to June 30 under the control of the sewer department:

SEWER MAINTENANCE.

RECEIVED	DEC. 1, 1910 — MAY 1, 1911 (BY STREET DEPARTMENT)	EXPENDED
\$3,500 00 43 42	Appropriation, Cash, Cleaning and flushing sewers, Repairing sewers, Cleaning catch-basins, Repairing catch-basins, Miscellaneous,	\$15 69 85 25 875 73 87 07 113 20
MAY 1, 1911—JUNE 30, 1911		
	Cash, Cleaning and flushing sewers, Repairing sewers, Cleaning catch-basins, Repairing catch-basins, Office expense, Miscellaneous,	15 29 7 89 1,885 93 30 62 24 00 156 78
	Unexpended balance,	\$3,297 45 285 34
\$3,582 79		\$3,582 79

There is due the department under this division for work done for outside parties between May 1 and June 30 a total of \$33.27.

SEWER CONSTRUCTION.

Under this division is carried forward the work of construction of such sewers, drains, catch-basins, etc., as may be ordered by the Board of Mayor and Aldermen, and also the work of connecting houses with the main sewers. As under sewer maintenance so under sewer construction the street department carried forward this work from December 1, 1910, to May 1, 1911, and for the last two months the construction work has been carried on by your commissioners. During the period of five months the street department built no new main sewers and during the two months your commissioners have built only one

main sewer, that on Carey street. Other sewers have been ordered and the work of construction will be undertaken at an early date.

The following table shows the receipts and expenditures under this division covering a period of seven months :

RECEIVED	DECEMBER 1, 1910 — MAY 1, 1911 (BY STREET DEPARTMENT)	EXPENDED
\$165 51 139 77	Balance December 1, 1910. Cash. House connections, Catch-basins and manholes,	\$154 64 109 22
238 46	MAY 1, 1911 — JUNE 30, 1911 Cash, Main sewer, Carey street. House connections, Miscellaneous, Account overdrawn.	200 87 502 69 116 46
540 14		
\$1,083 88		\$1,083 88

There is due the department under this division for work done for outside parties between May 1 and June 30 a total of \$138.08.

Respectfully submitted,
 ARTHUR H. LOWE,
 DAVID M. DILLON,
 DANIEL A. BOYLE,
Sewage Disposal Commissioners.

THIRD
SEMI-ANNUAL REPORT
OF THE
SEWAGE
DISPOSAL COMMISSION
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG :
H. M. DOWNS PRINTING CO.
1912



SEWAGE DISPOSAL COMMISSION.

352 Main Street.

FITCHBURG, MASS., January 1, 1912.

To the Honorable City Council:

The Sewage Disposal Commission, established under provisions of Chapter 461 of the Acts of the year 1910, respectfully presents the following report giving an account of its doings, receipts and expenditures for the six months ending December 31, 1911, such report being its third semi-annual report.

I. ORGANIZATION.

(1) ADMINISTRATION.

There has been no change in the membership or organization of the Board during the past six months, the membership being Arthur H. Lowe, chairman, David M. Dillon and Daniel A. Boyle. David A. Hartwell has continued to act as clerk of the Board. Edith M. Whittemore has acted as stenographer and bookkeeper.

(2) ENGINEERING DEPARTMENT.

The principal engineers employed during the past six months were:

Chief Engineer, David A. Hartwell.

Consulting Engineer, Harrison P. Eddy.

Principal Office Assistant, Albert J. Holmes.

Assistant Engineers, Gordon H. Fernald, Ernest E. Lothrop.

Subordinates in the engineering force have been employed as needed, the greatest number of engineers employed at any one time, including those above mentioned, being twelve. No inspectors, appointed as such, have been employed, the inspection of all contract work being done by someone on the engineering force.

(3) MAINTENANCE DEPARTMENT.

The maintenance of the existing sewer system, including the cleaning of catch-basins, has been under the control of David A. Hartwell as superintendent with A. M. Jackson as assistant superintendent.

(4) CONSTRUCTION DEPARTMENT.

The construction of such sewers, drains and catch-basins as are ordered by the Board of Mayor and Aldermen, together with the making of connections from new or existing buildings with the sewers, is under the direct charge of David A. Hartwell as superintendent and A. M. Jackson as assistant superintendent.

II. MAIN INTERCEPTING SEWER.

(1) SECTION 3.

At the time of writing the last semi-annual report proposals for the construction of Section 3, main intercepting sewer, had been advertised, said proposals to be received July 11th. This section was for a sewer 45 inches in diameter and for a distance of about 2,930 feet between Putnam street and the river near the Dillon Steam Boiler Works. Takings of easements on private land for the purpose of constructing and maintaining this section of the main intercepting sewer were filed in the Worcester Northern District Registry of Deeds on June 26, 1911. The proposals were received on July 11th, and on July 13th the contract for this section was awarded to McCarthy & Walsh of East Boston, their proposal being the lowest of the nine received. Work was begun by the contractors July 26th and was carried forward with rapidity at four different locations in the length of the sewer to be constructed and the whole was satisfactorily completed some ten days before the specified time.

(2) SECTION 2A.

Between the southerly terminus of Section 3 and a point near the Arden mill of the American Woolen Co., the termini of this section, studies were made for two locations for the main

intercepting sewer, one under the bed of the river passing under the railroad bridge through land of the Fitchburg Gas and Electric Light Co. and land of the Geo. W. Wheelwright Paper Co., crossing the tracks of the B. & M. R. R. to a point near the railroad crossing to the Arden mill, and the other location was for a tunnel in Middle street and open cut through land of the New York, New Haven & Hartford R. R. and land purchased for a department yard to Water street at the Arden mill crossing. Some negotiations were had with the representatives of the Gas & Electric Light Co., and also the Wheelwright Paper Co., relative to damages for the necessary easement for the purpose of constructing the sewer but there seemed to be such opposition to such location as to make it possible that settlement of these damages would increase the cost at this location enough to off-set the probable increased cost of the construction of the tunnel line. With this possibility in view it was decided to receive proposals for both locations and leave the question of which location to build in to be settled after the proposals had been received. Proposals for these two locations were advertised for on July 27th and received on August 15th. After canvassing the proposals received it was ascertained that the difference between the lowest bidders on the two lines was \$10,363.60. As it seemed probable that the cost of easements for going through land of the Gas and Electric Light Co. and the Wheelwright Paper Co. would more than make up for the difference in construction cost of the two lines it was decided to build the tunnel line. Accordingly the contract was awarded to Little & Seretto, their proposal being the lowest. Takings of easements for the purpose of building and maintaining this section of the sewer were filed in the registry of deeds on September 20. These takings were on land between First street and the end of Section 3, on land between Fifth street and land of the city used as a sewer department yard and on land of the American Woolen Co. near the railroad crossing. The total length of this section included in these takings was about 600 feet. The balance of this section is in Middle street and Water street and the sewer department yard. Work has been in progress on this contract at moderate speed and at present about 580 feet of 48-inch sewer in open trench has been

completed. Some work has been done in sinking shafts and preparatory work for the construction of the tunnel.

(3) SECTION 1.

This section will be between the end of Section 2A near the Arden mill and the disposal works and will consist of about 900 feet of 48 inch concrete sewer and about 5,200 feet of 30 inch cast iron pipe. Studies are practically completed for this section and plans and specifications will be perfected so that proposals can be received for the construction early in the spring. It was at first planned to award the contract for this section in December so that the contractor could purchase the cast iron pipe and arrange for delivery during the winter, but uncertainty relative to details of the work needed to be done at the end of this section adjoining the disposal works made it difficult to write satisfactory specifications. In order to take advantage of the favorable condition of the market relative to the purchase of the cast iron pipe it was decided to purchase the 30 inch pipe direct from the foundry. Arrangements for purchase of this pipe will be made early so that all the pipe will be ready for laying early in the coming season.

(4) SECTION 4.

This section will include that portion of the main intercepting sewer from Putnam street westerly to some as yet undetermined point and the location for the construction of this sewer brings up the matter of the proposed location of Broad street, which was before the City Council of 1911 and has been referred to the City Council of 1912. The laying out of Broad street, from Cushing street to River street, was petitioned for by your commissioners under date of June 19, 1911. A general public hearing on this matter was held on October 10, at which the expressed sentiment was almost wholly favorable. At this hearing the chairman of the commission presented the need of this street as follows: "The petition which you have before you in this convention was presented solely on the responsibility of the Sewage Disposal Commission. This Commission presents for your study certain plans giving a feasible location of this proposed street. This location is merely suggestive and

it is not the purpose of the Commission to indicate that the street ought to be laid out on exactly the lines as indicated. The Commission has no intention to invade the province of the Committee on Highways and the City Engineer or to presume to dictate relative to the exact location.

The time comes when cities must decide important questions affecting their future growth and development. Procrastination of public work almost invariably leads to an increase in cost. It is no credit to a city to point to a do-nothing administration and claim that the taxes were less and debt decreased if public convenience and necessity required that work should have been done. The real reputation of a city is made in its years of up-building not in its years of stagnation. I say this to encourage any who may be timid in this particular case. It is not sufficient that we of today should simply meet the needs of today. It is a large part of our responsibility that we foresee and provide for the needs of the future. It is an honor to say of any citizen that he had a part in the doing of an important public work.

The time has come when Fitchburg has been ordered by the state to construct proper sewers and provide purification works. The sewer work is being done. Exhaustive studies have been made by Engineers Allen, Coffin, Barnes and Eddy. This is the best talent obtainable. All these engineers, together with Mr. Hartwell, who we consider the equal of any of the others so far as he has had experience and who is more familiar with the exact local conditions of streets, lines, grades and growth of this city, agree that the trunk sewer should be laid in the location of what has been designated as Broad street. After most careful study your commissioners agree with this conclusion. Locations for the trunk sewer have been decided upon below Putnam street and the sewer is under construction. This brings the work of study and construction of the trunk sewer to Putnam street. The location and decree of Broad street from Putnam street to River street is so interwoven with the location and construction of the trunk sewer that both should be considered at the same time. This is an important work. It is so important with such vital consequences upon the future growth and development of the city that the commissioners decided that the whole matter should be laid before the Mayor, the

Aldermen and the Council in joint convention, where any citizen interested could hear and be heard upon the pros and cons. The Commissioners can find no other suitable location for the trunk sewer. They are convinced that no first-class engineer would recommend the laying of the sewer in Elm street, Main street or the bed of the river. The construction of the sewer in Broad street will involve the taking of an easement thirty feet wide from Putnam street to Circle street and the damages to be caused by the taking and construction of the sewer will be nearly as heavy as if the street is laid out and built with almost no resulting benefits to the public in increase of taxes or convenience to traffic. The situation is practically this—the sewer will eventually be built along the line of the proposed street. If it is not approved by the present City Council it will be by some other and if there is unreasonable delay the sewer will be built by positive orders from the State Board of Health at no economy or credit to the city. The Commissioners have the same interest in the public good that members of the City Council have. They are just as anxious for the public economy and welfare. They would fail pitifully if they did not bring a matter of this importance before the city government so that each member can assume his share of the responsibility.

The work of the Commission upon the trunk sewer has led them to believe that Broad street should be built, that it should be laid out and decreed as soon as possible and built after the sewer is constructed, which in all probability will be during next year. The location and construction of the trunk sewer in that location makes the building of Broad street an economic necessity. The building of the sewer and the removal of the pollution from the river will take away one of the most potent objections to that locality. We hope the building of the trunk sewer will result in the purifying and beautifying of the river.

Aside from the construction of the sewer the Commissioners believe that the time has come when Broad street should be built. The project is not new. It has been before the public for several years. It was before the City Government in 1894. What a pity it was not decided then! When it is done the unanimous verdict will be, it should have been built years ago.

The building of the street will develop a large area in the very heart of the city. The laying out and building of Broad street will establish and settle all the uncertainties about lines and grades and enable abutters to plan permanent buildings and developments along the location. It will enable the industries now located there to be modernized and improved. It is not fair to the rest of the city that the large area to be affected by the building of Broad street should be allowed to lie fallow and thereby escape its fair proportion of taxation and fail to give its share to the community. The growth of the city requires the development of that area. The increasing needs of the business interests require it. The present condition of Main street is evidence of this. The increase of population of our city from 1870 to 1910 was from 11,260 to 37,826, an average of 18.1 per cent for every five years. In 1901 Mr. Coffin estimated the population of Fitchburg in 1950 to be 165,000. In 1903 Mr. Barnes estimated the population in 1950 to be 145,000. On a basis of an increase of 15 per cent each five years, which is less than the average increase for cities of the size of Fitchburg in Massachusetts, the population in 1950 will be 115,000. Does anybody doubt that with such a population a street in that location will be required? Does anybody doubt that we should begin now to plan for a city of that population and does anybody doubt that what we of today may do will have much to do with such a growth of population? At least don't let us hinder such a growth. Among the most important things in a growing city is to have opportunities to offer new industries. Give commercial conveniences to all. Shorten distance and expedite traffic. Avoid street railway tracks and cars. Reduce dangers of accidents. Make convenient and accessible the railroad facilities. Remove heavy teams from Main street and make shopping and trade more agreeable. The building of Broad street will afford all these things.

The length of Broad street from Cushing street to River street will be about 3800 feet. This will give opportunity for business blocks and manufacturing buildings about 7600 feet, one and one-half miles long, fronting a principal street parallel with Main street and with good connections at Putnam street, Newton Lane, Wood place and Rollstone street. Such buildings are needed. In our opinion the increase in taxes based

upon a fair valuation after the street is built will pay the interest upon the cost of the street from the start and in a few years the increase in taxes upon the new industries, buildings and developments upon the new street will rapidly liquidate the cost of the street. There will be damages and any person or interest damaged beyond the betterments to be derived should be fully compensated. Let the basis of damage become the basis of valuation upon which taxes shall be assessed."

By building the main sewer in this location sewerage will be provided for a large area of undeveloped land in the heart of the city, an area which cannot be developed to any such extent in future years as it ought to be developed without sewerage, and an area which probably will be without sewerage for many years if the main sewer should be built at any other location.

The committee on finance and highways acting jointly have considered this matter and our chief engineer and the city engineer have jointly prepared preliminary plans and an estimated cost of construction. The proper location for the main intercepting sewer from Putnam street westerly has been considered in the last 17 years by a number of engineers, namely Messrs. Allen, Coffin, Barnes and Eddy. The chief engineer, who by his long experience as city engineer is thoroughly conversant with all phases of this problem, also agrees with the above named engineers that the best location for the sewer from Putnam street westerly is in the location of the proposed Broad street. The combining of the building of the sewer with the construction of the street will undoubtedly make a large saving to the city over the construction of the sewer in some other location. Your commissioners believe that the street ought to be laid out and the sewer built in the street and would therefore urge that your honorable body take early action on this matter that this location may be available for the construction of this section of the sewer the coming season.

III. DISPOSAL.

Of a total area of 116.67 acres taken for a disposal area settlement has been made with the Fitchburg Railroad Co. for 47 acres of land, the payment being \$6462.50 and with Arthur H.

Lowe for 6.5 acres of land, the payment being \$892.33. This land being for sale was purchased in 1910 by Mr. Lowe for the use of the department in connection with the disposal of sewage. The wood on the land of the Fitchburg Railroad Co. has been cut off and the brush burned so that this area is in shape to use next year for the purpose of excavating material for the construction of filter beds. Test pits have been dug and samples of material taken for the purpose of ascertaining the value of the material as a filtering medium.

IV. RIVER IMPROVEMENT.

One of the leading reasons for the creation of the sewage disposal commission and the construction of the main intercepting sewer and disposal works was that the condition of the river might be so improved as to eliminate the nuisance which is prevalent during the minimum flow of the summer months. To further carry on the improvement of the river and prevent so far as possible pollution by persons owning land along the river or by persons having access to the river it seems to your commissioners that something ought to be done to authorize some person or body to exercise authority to prevent the throwing of organic matter or unsightly material into the river. If the city spends a number of hundred thousand dollars in an effort to improve the waters of the river, either the sewage disposal commissioners or some other board or person ought to have authority to prevent the pollution of the river through the negligence or indifference of private parties in order that the full benefit of the work done by the city may be realized. Whether such authority would be in the nature of walling in or improvement of the channel of the river, or would simply be in the nature of police duty, would have to be determined by the legislature in the text of the act which might be adopted. It seems to your commissioners that this matter might be taken up by you and considered at an early date.

V. DEPARTMENT BUILDING AND YARD.

Having purchased the Walker lot on Water street, as stated in the second semi-annual report, your commissioners believed that it was desirable to erect at as early a date as possi-

ble properly planned buildings upon this lot, that the work to be done by this department might be carried forward as advantageously as possible. A number of schemes for buildings were studied and one plan adopted. Detail plans for the proposed building were drafted and specifications written. These were submitted to contractors and proposals received October 16 as follows: John R. Hosmer, \$16,651; J. D. Littlehale, \$17,000; S. S. and H. N. Lawrence, \$17,245; and S. J. Leger, \$19,492. The contract was awarded to John R. Hosmer. The building is red brick with Rollstone granite underpinning and trimmings. The main building is 38 ft. x 82 ft., two stories high, the first floor to contain tool room, store keeper's room, men's room and lavatory, the second story to contain work room, laboratory and rooms suitable for offices or other purposes. There is a one story ell 27 ft. x 41 ft. 6 in. containing a room for a blacksmith shop and a garage for the storage of three autos or carriages. Work was begun on this building in October and at the present writing is nearly ready for placing the roof. The contract calls for the completion of the building March 15, 1912. This will insure the use of the building for the work of the coming season.

A side track has been constructed at this location of sufficient length to accommodate four cars, and use has already been made of this track in unloading a number of cars of sewer pipe. This track will be extended in the spring to the full length of the lot, and possibly a wooden building constructed for the storage of cement and other supplies. The cottage house on the lot is being occupied at present and rental of \$13 per month received. This house will probably be removed from the lot the coming season. The whole area of the lot is needed for department uses.

VI. WORK ACCOMPLISHED AND PLANNED FOR 1912.

Considering the fact that studies for the main intercepting sewer were not sufficiently completed to warrant any attempt at construction until early in the summer of 1911 your commissioners believe that they have made a satisfactory start on the work for which they were appointed. About 3,500 feet of the main sewer has been built and an additional length of about

2,300 feet is now under contract. Studies are being made and will probably be completed during the winter for Section 1 between that portion of the sewer already contracted for and the disposal area, and also for the section of the main sewer westerly from Putnam street. Studies are also being made relative to the method of disposal and the construction work necessary therefor. It is hoped that during the season of 1912 the main sewer may be completed from the disposal works to Sheldon street, and possibly as far west as Oak Hill road, provided Broad street is decreed or an easement taken in that location. It is also expected that the disposal plant will be so far constructed that connections from existing outlets can be made with the main sewer and that all of the sewage so far as the main sewer shall have been constructed will be delivered to the disposal works by the end of the season. This will probably remove at least 50 per cent of the present flow of sewage from the river. This briefly covers the possible construction for 1912, although legal or physical difficulties may be encountered which may make it impossible to accomplish this amount of work.

VII. ADDITIONAL LEGISLATION.

Chapter 461 of the Acts of 1910, authorizing the appointment of the Sewage Disposal Commission states that the Commission shall construct a main trunk sewer and a system of sewage disposal as approved by the State Board of Health referring evidently to the action of the State Board of Health in December, 1903, approving the plans recommended by the late Freeman C. Coffin. During the past eight years there has been such an advance made in methods of sewage disposal that it seems to your commissioners that Fitchburg ought to be allowed to avail itself of some of these approved methods, especially as some of them are apparently less expensive in first cost and also in maintenance than that already approved by the State Board of Health. Your commissioners have made arrangements for some modification of this act by the legislature of 1912. Just what form this new legislation will take has not yet been definitely decided, but the following petition and copy of a proposed act have been presented to the legislature.

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court Assembled

The undersigned citizens of Fitchburg respectfully represent that they are the Sewage Disposal Commission appointed under authority of Chapter 461, Acts 1910, and they would respectfully petition your honorable bodies to adopt the accompanying act.

ARTHUR H. LOWE.

DAVID M. DILLON.

DANIEL A. BOYLE.

Sewage Disposal Commission.

AN ACT TO AUTHORIZE THE CITY OF FITCHBURG TO ESTABLISH A SYSTEM OF SEWAGE DISPOSAL.

Be it enacted, etc., as follows :

SECTION 1. The city of Fitchburg without being restricted as to the method, is hereby authorized to construct, maintain and operate main drains and a system of sewage disposal for said city.

SECTION 2. No act shall be done under authority of the preceding section until the plans for said system of sewage disposal have been approved by the State Board Health, and said Board need be in no manner prejudiced by any previous action by it upon plans submitted by the city of Fitchburg.

SECTION 3. So much of the Acts of the year 1910 as may be inconsistent with the foregoing provisions is hereby repealed.

SECTION 4. This Act shall take effect on its passage.

VIII. EXPENDITURES—IMPROVED SEWER SYSTEM

For the six months ending December 31, 1911, your commissioners have expended the sums indicated in the following table under the various sub-divisions, which table also shows the total amount spent in this account to December 31, 1911.

GENERAL CHARACTER OF EXPENDITURES	For six months ending December 31, 1911	From beginning of work to Dec. 31, 1911
General work applicable to all divisions of Improved Sewer System.		
Administration.		\$486 45
Stenographer and bookkeeper,	\$288 00	624 00
Stationery, printing, stamps,	73 21	394 25
Telephone and express,	68 89	133 04
Traveling	15 64	135 91
Furniture and fixtures,	405 00	2,132 71
Rent, light and care of rooms,	413 18	875 73
Books and maps		71 95
Miscellaneous,	35 03	43 58
	\$1,298 95	\$4,897 62
Department Yard, Water street.		
Repairing buildings,	1 62	114 19
Furniture,	9 85	9 85
Water rates,	4 50	4 50
Purchase of lot,		12,245 5
Sidetrack at yard,		1,080 00
New buildings,	7,312 42	7,312 42
	7,328 39	20,766 21
	\$8,627 34	\$25,663 83
Engineering.		
Chief Engineer,	\$1,099 80	\$1,903 50
Assistant engineers and draftsmen,	3,048 89	5,611 97
Inspectors,	802 76	802 76
Consulting engineers and special studies,	1,739 98	1,739 98
Transportation,	56 30	149 55
Engineering and drafting tools and supplies,	177 32	1,462 44
Books and maps,		39 00
City Engineering Dept. (surveys),		122 85
Parker, Bateman & Chase, (surveys),		60 02
Miscellaneous supplies	16 00	49 75
	6,941 05	11,932 82
Main Intercepting Sewer.		
Wash borings,	99 44	596 16
Advertising,	53 95	104 35
Printing,	159 00	159 00
	312 39	859 51
Section 3.		
McCarthy & Walsh,	35,058 41	35,058 41
Pipe,	428 60	428 60
Castings,	107 33	107 33
Miscellaneous supplies,	96 80	96 80
	35,691 14	35,691 14
Section 2A.		
Little & Seretto,	10,135 88	10,135 88
Pipe,	238 02	238 02
Castings,	10 10	10 10
Miscellaneous,	65 76	65 76
	10,449 76	10,449 76
Disposal.	\$46,453 39	\$47,000 41
Land purchase,	\$6,466 90	\$7,369 48
Test pits,	296 24	296 24
Cutting brush,	1,458 27	1,458 27
Miscellaneous,	1 15	1 15
	8,222 56	9,125 14
Separation.		
Rain gage,	131 99	131 99
	131 99	131 99
	\$70,376 23	\$93,854 19

RECEIPTS.

General :

Fixtures,	\$42 89
Telephone charges,	1 53
Miscellaneous,	45

	\$44 87

Department yard :

Rent of house,	\$91 00
Old lumber,	30 00
Rent of pumps,	48 25

	\$169 25

Engineering :

Damage to drafting table,	\$2 00
Supplies sold,	6 72

	\$8 72

Disposal :

Cord wood,	\$285 75
Old shed,	15 00

	\$300 75

	\$523 59
Loan,	100,000 00

	\$100,523 59

IX. PUNCH BROOK DIVERSION.

The petition of the Safety Fund National bank and others, asking that the course of Punch Brook from Academy street be diverted through Academy, Main and Rollstone streets to the Nashua river, which was referred on July 6 to the Sewage Disposal Commissioners, was considered by the Commissioners, and the chief engineer and consulting engineer were requested to investigate this matter and report. Their report was submitted to the City Council November 28, 1911, and is given in full in Appendix A.

If it is the intention of the City Council to do anything relative to Punch Brook in the near future it would seem to your commissioners that early action ought to be taken because work which will probably be done on the main intercepting sewer and connections next season in Putnam street and in

Main street between Putnam and Prichard streets could be combined with work recommended by the engineers relative to the Punch Brook problem and a considerable saving in total expense could be made.

X. SEWER MAINTENANCE.

As stated in the second semi-annual report the maintenance of the sewer system was continued by the Street Commissioners from December 1, 1910, to May 1, 1911. During the twelve months ending November 30, 1911, there was expended in this account \$5,600.03, of which amount \$4,380.95 was for cleaning catch-basins. The following amounts have been expended in recent years for cleaning catch-basins : 1904, \$4,016.30 ; 1905, \$3,726.04 ; 1906, \$3,710.23 ; 1907, \$3,841.34 ; 1908, \$4,059.43 ; 1909, \$2,639.99 ; 1910, \$2,888.09, and 1911, \$4,380.95. While the amount expended for cleaning catch-basins in 1911 has been larger than in any other year in the recent history of the city it can be confidently stated that there has been more thorough cleaning and care of the catch-basins than has been customary. The appropriation for sewer maintenance of \$3,500 per year is altogether inadequate to properly carry on this work, as from the figures above given it can be seen that the appropriation is not sufficient in ordinary years to even clean the catch-basins to say nothing about the necessary expense of cleaning and flushing sewers and doing such minor repairs as are required each year. In this connection it might be well to state that if there was more care taken by the street department in the selection of material used for surfacing streets where there is liable to be a heavy wash at times of rain there would not be the need of so much expenditure in the cleaning of catch-basins. There are certain catch-basins in the city which have been cleaned seven or eight times during the past season and yet it was a season which was not marked by excessive rains. It is no credit to one department of the city to so carry forward its work as to make another department incur an unnecessary expense in doing its work. In addition to the inferior material used on some streets there is a noticeable neglect on the part of the street department in cleaning gutters with the result that at times of heavy rain material that could easily have been taken

from the gutters and carted away is washed into the catch-basins, necessitating a large additional expense for shovelling from the basins before carting away. It seems to your commissioners that more attention by the street department along these lines would be the means of saving considerable expenditure of the city's money in keeping the catch-basins in condition to do the work for which they are constructed.

Your commissioners would recommend that there be a substantial increase in the appropriation for sewer maintenance in 1912. The average expenditure under sewer maintenance account the last eight years has been \$5,027.80. It would seem to your commissioners that in order to properly maintain the system the coming year, including some repairs which ought to be made to certain man-holes and catch-basins there should be an appropriation of \$6,000. The following table shows the receipts and expenditures under this division for the twelve months ending November 30, 1911:

SEWER MAINTENANCE.

RECEIVED	DEC. 1, 1910 — MAY 1, 1911 (BY STREET DEPARTMENT)	EXPENDED
\$3,500 00 43 42	Appropriation, Cash, Cleaning and flushing sewers, Repairing sewers, Cleaning catch-basins, Repairing catch-basins, Miscellaneous,	\$15 69 85 25 875 73 87 07 113 20
MAY 1, 1911—Nov. 30, 1911		
108 44 56 32	Cash, Debts receivable, Cleaning and flushing sewers, Repairing sewers, Cleaning catch-basins, Repairing catch-basins, Miscellaneous, To balance,	410 71 36 09 3,505 22 116 95 354 12
1,891 85		
\$5,600 03		\$5,600 03

. XI. SEWER CONSTRUCTION.

As stated in the second semi-annual report, sewer construction was carried on by the Street Commissioners from December 1, 1910, to May 1, 1911. During the twelve months ending November 30, 1911, there was expended in this account a total of \$14,103.46 as given in detail in the accompanying table, which shows the expenditures and receipts.

Sewers have been constructed as ordered by the Mayor and Aldermen in Beech, Bridge, Carey, Essex, Martel, Maverick, Melrose, Pratt, and Roosevelt streets and in Pratt road. The sewer ordered constructed in Elizabeth street has been partly constructed. Owing to the excavation in Elizabeth street being almost wholly rock it has been a slow and expensive construction. Sewers have also been ordered in Clifton, Columbus, Rollstone, and Woodland streets, and in Gardner and Westminster Hill roads. The purchase of pipe has been made for some of these sewers and some preliminary work done, but they were ordered so late in the season that construction was necessarily deferred until another year. Catch-basins have been constructed in Clinton, South and Water streets. Other catch-basins ordered will be constructed before winter if possible, otherwise the work will be delayed until another year.

Since your commissioners have assumed charge of the work they have issued 109 permits for connections with public sewers. From December 1, 1910, to May 1, 1911, the Street Commissioners issued 21 permits for this purpose, making a total for the twelve months of 130. According to the report of the Street Commissioners the number of permits issued in 1910 was 173 and in 1909, 98. The average number issued for the years from 1900 to 1908 inclusive was 52. This would seem to indicate that during the last three years there has been a steady growth throughout the city if the erection of new buildings is anything by which to judge.

The item of \$3,772.75 for special studies in 1900 and 1903 is an expenditure transferred to this account by the auditor in order that the account might be removed from the current yearly account and payment therefor included in the municipal loan.

SEWER CONSTRUCTION

RECEIVED	DECEMBER 1, 1910 TO MAY 1, 1911 (BY STREET DEPARTMENT)	EXPENDED
\$165 51	Balance December 1, 1910.	
106 84	Assessments.	
32 93	Cash.	
	House connections,	\$154 64
	Catch-basins and manholes,	109 22
	MAY 1, 1911 TO NOVEMBER 30, 1911	
2,726 71	Assessments.	
988 19	Cash.	
919 96	Debts receivable.	
	Sewers.	
	Beech street,	676 81
	Bridge street,	297 83
	Carey street,	353 99
	Clifton street,	107 50
	Columbus street,	4 74
	Elizabeth street,	2,466 59
	Essex street,	284 58
	Gardner road,	7 29
	Martel street,	484 36
	Maverick street,	275 14
	Melrose street,	220 75
	Pratt street,	301 80
	Pratt road,	1,245 50
	Rollstone street,	183 03
	Roosevelt street,	578 96
	Westminster Hill road,	2 08
	Woodland street,	72 30
	Catch-basins.	
	Clinton street,	34 85
	Dover street,	5 00
	South street,	39 31
	Water street,	27 01
	Private work,	61 78
	Traps,	66 00
	House connections,	1,549 47
	Miscellaneous.	
	Brick,	40 26
	Castings,	160 80
	Pipe and cement,	291 11
	Car tickets,	50 00
	Kerosene,	21 46
	Shovels,	25 75
	Office supplies,	34 20
	Sundries,	56 60
	Special studies 1900-1903, (Coffin & Barnes),	
	transferred by Auditor,	3,772 75
	Loan to balance,	
9,163 32		
\$14,103 46		\$14,103 46

There is personal property of the city under the control of your commissioners of a total value as listed of \$5,116.14. The value of this property used in connection with the maintenance and construction work and located at the department yard amounts to \$1,505.26, the value of that used by the engineering department for field and office work amounts to \$1,650.78 and in the main office, including office furniture, the personal property amounts to \$1,960.10. A list of this property is on file at the office.

The work done under the divisions of sewer maintenance and sewer construction are treated more in detail by the superintendent in his report, which is transmitted herewith as a part of this report. The work in connection with the improved sewer system is given more in detail in the report of the chief engineer and consulting engineer, which is herewith transmitted to you as a part of this report.

ARTHUR H. LOWE,
DAVID M. DILLON,
DANIEL A. BOYLE,
Sewage Disposal Commissioners.

SUPERINTENDENT'S REPORT

To the Sewage Disposal Commission,

GENTLEMEN: — I herewith respectfully present my report as superintendent covering the work under the maintenance and construction accounts for the year ending November 30, 1911.

MAINTENANCE.

In beginning any new work or organizing any new department it takes some time to plan the work and determine methods for carrying forward the work to be done. While I began my work as your superintendent in December, 1910, yet it did not seem to be desirable to organize and maintain a day labor force during the winter to care for such a small amount of work as would probably be needed. Accordingly arrangements were made to have the superintendent of streets continue this work for some months as he had done for years before the sewage disposal commission was appointed. This arrangement was continued until May 1, 1911. At that time Mr. A. M. Jackson, who had been superintendent of streets and sewers in Leominster for some years, was appointed as assistant superintendent. Mr. Jackson has had charge of all the day labor force in this division so that I have had to spend very little time on the detail of the maintenance work, thus allowing me to devote my time to the engineering features of the construction work and the improved sewer system.

The most important feature of this division is the cleaning of the catch-basins which entailed an expenditure for the whole year of \$4,380.95 or about 78% of the total expenditure. From May to November inclusive some account was kept of the cost of cleaning catch-basins which shows that during these six months covering a total of about 1,260 basin cleanings the average cost was \$2.56. The average amount of material handled

from each basin was 1.58 cubic yards making the cost per cubic yard \$1.62. The difficulty of finding suitable places to deposit waste material without excessive length of haul is a problem which faces all city departments as well as citizens and corporations. This difficulty will increase with the growth of the city and will probably tend to increase the cost of cleaning catch-basins year by year so far as teaming is concerned.

All catch basins have been thoroughly cleaned and kept cleaned even though some have been cleaned six or eight times during the season. I believe that a little more care on the part of the street department in the selection of material to be placed on our steeper streets would greatly reduce the number of cleanings required for some of the basins at the foot of these hills. It does not seem just for the street department to place on such streets material that does not easily become compacted and which at the time of any ordinary rain will completely fill the basins. Further, if more attention was given to cleaning gutters throughout the summer much of the material now taken from the basins could be taken from the gutters at much less expense. I have observed gutters in different sections of the city filled fully one-half the depth to the top of the curb with material which during a good shower would be washed into the basins. And during building operations much material is deposited in the streets and allowed to remain there many weeks which adds materially to the amount of matter that fills the basins. Perhaps such an ideal condition of street cleaning would add somewhat to the cost of street maintenance yet it would lessen the cost of cleaning catch-basins more than it would increase the cost of street maintenance and so the city would not only be the gainer financially but there would also be a gain in the attractiveness of the public ways. The total number of catch-basins to be cared for at present is about 859. This includes all inlets to the sewers for surface water. Some of these are round grates in the car tracks or in the gutters with but small basins in which material is held and so need but little care and attention, but fully 90 per cent are regular basins with curb inlets.

All the sewers built on the flatter grades have been thoroughly inspected and flushed with water from fire hydrants through fire hose so that at present all the sewers are in good

working condition. I shall aim to have all such sewers as are liable to stoppage inspected and flushed at least twice every year.

The cast iron covers to a number of manholes are a foot or more below the surface of the street. In such cases I believe the covers ought to be raised to bring them about to the street grade. Whenever it becomes necessary to enter such a manhole it causes too much disturbance to the street surface to uncover it and during winter causes a large expense to get through that amount of frozen road surface. It does not cost much to raise one such cover but to raise quite a number makes a large total expense. I shall endeavor to remedy this condition as fast as funds are available to do the work.

The inverts of many of the manholes built during the earlier years of sewer construction are one to three feet below the sewer grade. This is a very undesirable condition as this sump makes a cesspool in which putrefaction of sewage is in progress, causing offensive odors to arise from the different inlets for surface water. Further, this putrefaction causes septic action of a portion of the sewage, making it somewhat stale when it reaches the outlet at the river. While this is not particularly objectionable under present conditions, yet when disposal works are built and in operation it will be decidedly objectionable as it is generally considered that fresh sewage is very essential in the kind of disposal works which we will probably build. I believe the inverts to these sump manholes ought to be changed at as early a stage in our work as possible.

The amount expended during the year for maintenance was \$5,600 03, divided as follows:

Cleaning catch-basins,	\$4,380 95
Cleaning and flushing sewers,	426 40
Repairing sewers,	121 34
Repairing catch-basins,	204 02
Miscellaneous,	467 32
	— — —
	\$5,600 03

The amount expended each month was as follows:

December, 1910,	\$109 13
January, 1911,	57 99
February,	231 33

March,	\$212 89
April,	565 60
May,	1,028 60
June,	1,091 91
July,	309 57
August,	552 81
September,	664 95
October,	438 72
November,	336 53

	\$5,600 03

CONSTRUCTION.

As in maintenance, so in construction, the work required to be done between December 1, 1910, and May 1, 1911, was attended to by Superintendent of Streets Hogan, no organization having been made to take over this work and it was simply continuing him in charge of the work he had been doing before the Sewage Disposal Commission was created. But little work was required of him, however, as the total expenditure for the five months was \$263.86.

Since May 1, Mr. Jackson, my assistant, has had charge of the day labor force on construction work as well as maintenance.

The work to be done under construction account consists of the building of such main sewers and drains as may be ordered by the Mayor and Aldermen, the building of catch-basins ordered, and the making of the connections of buildings with the sewers.

SEWERS. The length of new sewers built in 1911 was 4,813 feet or .91 of a mile. The following table shows the length of sewers built in the different streets, together with other interesting information. The total cost of the completed sewer is given in each case, except Elizabeth street which is unfinished and the cost of that sewer is to November 30.

SEWERS BUILT IN 1911

Sewers have been ordered but not yet built in Clifton, Columbus, Rollstone and Woodland streets and in Gardner and Westminster Hill roads. On these sewers some preliminary work has been done and the pipe purchased so that work can be begun early next season.

The total length of all main sewers December 1, 1911, was 222,062 feet or 42.06 miles. Sewer assessments amounting to \$2,833.55 have been levied during the year.

The length and size of brick, and brick and cement concrete sewers, December 1, 1911, not including the main intercepting sewer, is as follows:

Diameter in Inches	Length in Feet
14x21	1,590
16x24	285
18x27	3,775
24	240
20x30	4,293
22x33	710
24x36	450
26x39	4,710
28x42	1,555
30x45	490
32x48	4,150
36x54	600
40x60	838
60	480

The total length of brick, and brick and cement concrete sewers is 24,166 feet or 4.58 miles.

There are 145 manholes on the line of these sewers.

The length and size of pipe sewers December 1, 1911, is as follows:

Diameter in Inches	Length in Feet
6	33
8	16,019
10	61,702
12	78,968
15	21,551
16	659
18	11,540
20	5,389
24	60
12x18	895
15x18	1,080

The total length of pipe sewers is 197,896 feet or 37.48 miles.

There are 907 manholes on the line of pipe sewers.

DRAINS. As one of the problems of the improved sewer system is the separation of sewage and surface water it seems advisable in all additions to the sewer system to so build as to make as little additional work as possible when the time for separation comes. With this end in view no catch-basins have been constructed and connected with any of the sewers built in 1911. In Elizabeth street it seemed desirable to have catch-basins constructed, and the Mayor and Aldermen ordered that a pipe for surface water only be laid in the trench with the sanitary sewer. This has been done, a 15 inch pipe being laid from South street to Salome street, a distance of 370 feet, and a 12 inch pipe from Salome street to Whitney street, a distance of 260 feet.

The only drains (pipes laid for and carrying surface water only) in the city are given in the following table.

DRAINS LAID TO DECEMBER 1, 1911.

STREET	LOCATION	Size in inches	Length in feet
River	Near Orswell Mill,	12, 15	566
South	From South St., near Laurel St., to river,	18	490
Main	From Willow street, easterly,	18	162
Water	From Union Machine Co. office to river,	18	150
Martel	From Daniels street, easterly,	18, 20, 24	320
Pine	From Milk street to Burnap street,	10	520
Delisle	From Clarendon street to Battles street,	12	546
Elizabeth	From South street to Whitney street,	12, 15	630
			3,384

CATCH-BASINS. Three catch-basins have been built, as ordered by the City Council, as follows: In Water street near the driveway to the Arden mill, in South street near Henry street, and in Clinton street at Damon street. Owing to a change in the street lines at the junction of Highland avenue and Lunenburg street it was necessary to rebuild the two catch-basins at that location. This work was done by the sewer department and the cost of the work was transferred from street construction account. Catch-basins have been ordered in Dover, Falulah and Nutting streets and in Duck Mill road. These will receive my early attention.

It seems to me that before ordering any new catch-basins it would be a good thing for the City Council or some committee to confer with some representative of the sewer department, as by so doing there might be stopped the undesirability of ordering catch-basins in locations where they ought not to be built, or where if built they would be of no use at the time of separation of storm water from sewage. There are many catch-basins already built which would never have been built if some definite plan had been considered with reference to that particular locality. This method of doing work entails an unwise expenditure of money. The catch-basin ordered in Nutting street is, in my judgment, uncalled for as there is a basin within 150 feet of the location asked for and the opening up of a good gutter to the present basin would be all that is needed.

HOUSE CONNECTIONS. Permits to connect with main sewers to the number of 109 were issued between May 1 and November 30. Not all were for new houses, some being for

old houses on the line of new sewers that were built. No permit to connect with a sewer is issued until the applicant has received or applied for a permit to excavate in a public street. Many inquiries are made relative to the cost of making a sewer connection, and to in a measure meet this desire on the part of owners I will say, that with 72 connections made during the year under ordinary conditions, the cost of all work and material outside the house averaged 42 cents a linear foot. Where rock excavation is necessary the cost is increased four or five times the average. In about 25 per cent of the connections the cost was less than 30 cents a foot, and in about 15 per cent the cost exceeded 60 cents per foot.

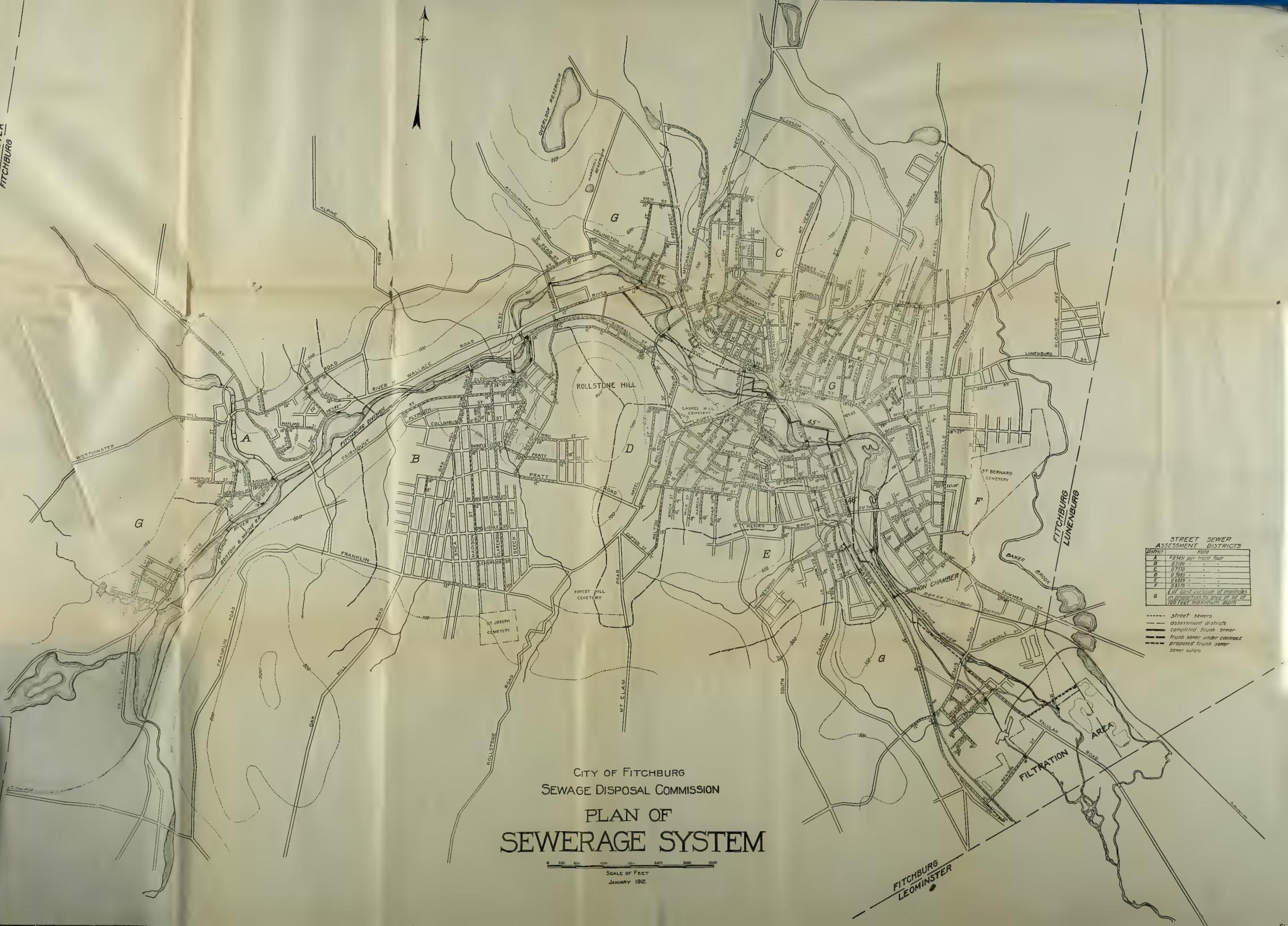
MAP. Accompanying this report is a map of the city showing all the sewers, together with the size of each and the various sewer assessment districts.

Respectfully submitted,

DAVID A. HARTWELL,

Superintendent.





REPORT TO THE
Sewage Disposal Commission
FITCHBURG, MASSACHUSETTS
UPON THE
ENGINEERING WORK
OF THE YEAR 1911

DAVID A. HARTWELL, Chief Engineer
HARRISON P. EDDY, Consulting Engineer

MARCH, 1912

OUTLINE OF ENGINEERS' REPORT.

Introduction.

Engineering Organization.

Preliminary Studies Relative to Intercepting Sewer and Deductions Therefrom.

Period of Time in the Future for Which Provision Should be Made.

Estimate of Future Population.

Present and Estimated Future Sewered Area.

Sewer Districts.

Density of Population in Sewer Districts.

Water Supply.

Storm Water.

Ground Water.

Industrial Wastes.

Quantity of Sewage for Which Intercepting Sewer Should Provide.

Quantity of Sewage for Which Purification Works Should Provide.

High and Low Level Districts.

Intercepting Sewer.

Section 1.

Section 2A.

Section 3.

Construction in 1911.

Section 3. Intercepting Sewer.

Section 2A. Intercepting Sewer.

Section 1. Intercepting Sewer.

Section 4. Intercepting Sewer.

Lateral Connections.

Weir to Ascertain Leakage.

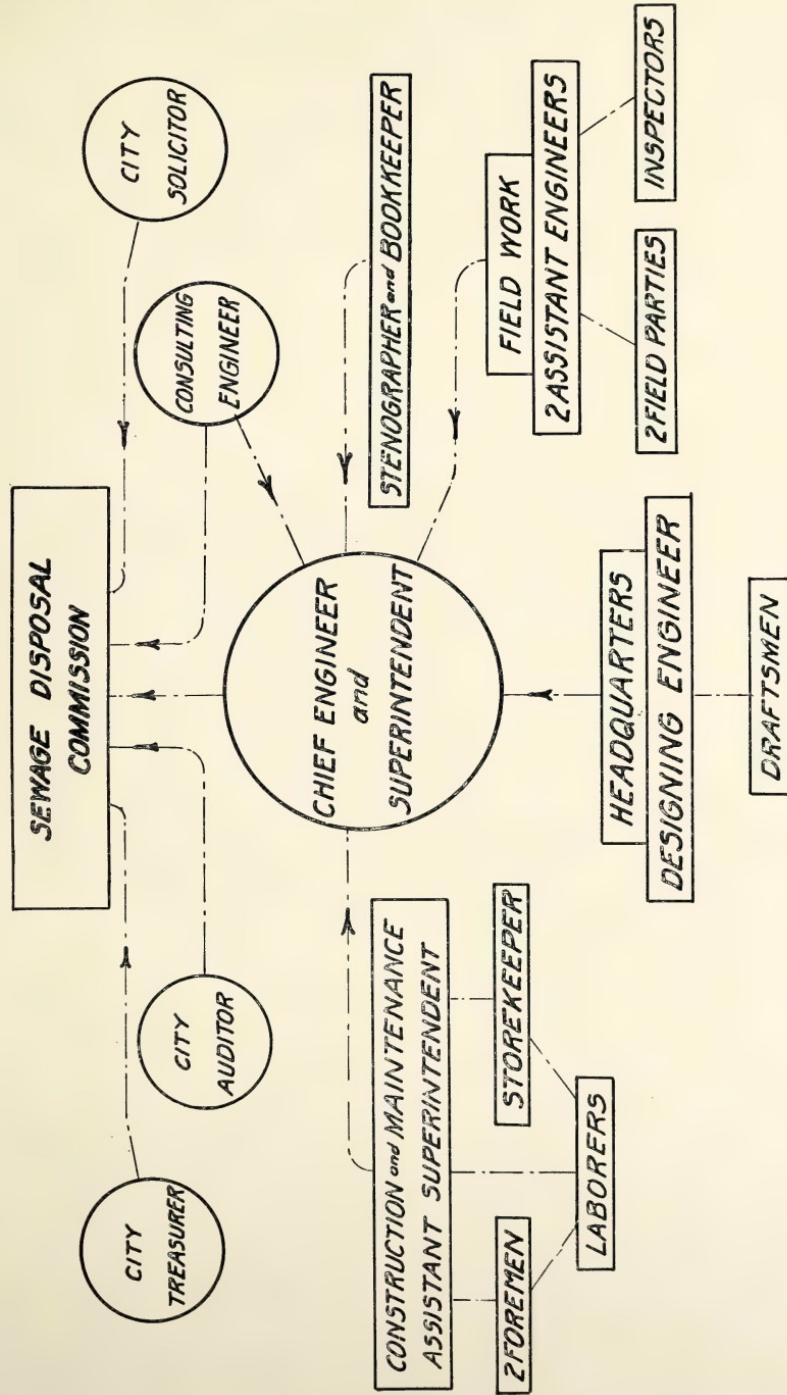
Disposal Area.

Rain Gage.

Department Yard and Building.

Sewage Disposal.

Manufacturing Wastes.





REPORT OF CHIEF ENGINEER AND CONSULTING ENGINEER

FITCHBURG, MASS., February 5, 1912.

Sewage Disposal Commissioners :

GENTLEMEN:—We respectfully submit for your consideration the following report of the work done on engineering and construction with relation to the improved sewer system to December 31, 1911.

You will find the matter of preliminary studies and the various data collected to assist in fixing quantities of sewage flow, sizes and grades, is presented in considerable detail but we feel that these studies and the deductions made therefrom ought to be made a matter of record. So far studies have been completed only with reference to fundamental data for the main intercepting sewer, the studies relative to disposal and separation still being under consideration.

ENGINEERING ORGANIZATION.

Following is a list of engineers who have been employed for differing periods of time during 1911 in the positions indicated:

David A. Hartwell,	Chief Engineer
Harrison P. Eddy,	Consulting Engineer
Albert J. Holmes,	Assistant Engineer
Gordon H. Fernald,	Assistant Engineer
Ernest E. Lothrop,	Assistant Engineer
Maurice W. Howe,	Instrument man
Philip W. Taylor,	Instrument man
Edward Dahill, Jr.,	Instrument man
Milton B. Hager,	Instrument man
Clarence E. Pethybridge,	Rodman

Henry J. Hart,	Rodman
Cyril B. Raymond,	Rodman
John E. Herlihy,	Rodman
Ralph E. Bull,	Rodman
Lawrence G. Rice,	Rodman
Frederick L. Roache,	Rodman

No inspectors have been appointed on any of the contracts it being considered as more satisfactory on this work to have all inspecting done by the engineering force.

PRELIMINARY STUDIES RELATIVE TO INTERCEPTING SEWER AND DEDUCTIONS THEREFROM.

PERIOD OF TIME IN THE FUTURE FOR WHICH PROVISION SHOULD BE MADE. The construction of intercepting sewers, as well as trunk and lateral sewers, involves not only much expense but also considerable inconvenience to the public. If sewers are built of too small a capacity, the expense of providing relief sewers, or of replacing the old ones with new and larger structures, is generally considerably more than of building them somewhat larger in the beginning. It is therefore, good policy to build the sewer system of ample capacity for a long period in the future.

The construction of tanks and filters does not cause inconvenience to the public and such works can be readily and economically extended from time to time as the quantity of sewage increases. In the design of the disposal works, therefore, it is not necessary to provide at the outset as liberally for future requirements as in the design of the sewer system.

The Act of 1901, giving the city authority to borrow money for the construction of sewers and purification works, provides that the indebtedness shall be incurred for a period of not more than thirty years. Obviously, the sewer should be built of sufficient capacity to serve without enlargement or duplication during the period for which the loans are made, so that it will not be necessary to replace them at least until after the loans have matured.

After giving careful consideration to the various phases of this problem, it was decided that the economic period, for which sewers should be built, should be at least thirty years and the estimates of population and of area, which will be tributary to the sewer system, have been made to cover the period ending in 1940. These estimates of quantities, however, have been made liberal and it is probable that the sewers will prove of sufficient capacity to serve the city a somewhat longer time. In designing such portions of the purification works as can be readily extended from time to time, provision will be made for the needs of the city to 1925 or 1930, (when a population of 55,000 will have been reached), the intention being that these

works shall be extended at or about 1925 to provide for such increase in population as may then seem justified.

ESTIMATE OF FUTURE POPULATION. It is extremely difficult to estimate with accuracy the future growth of any community as such growth depends greatly upon the development of manufacturing, and the continued operation of manufactories already established. There are, however, certain facts which may serve as a guide in estimating the population which may reasonably be expected in the comparatively near future, such as the growth of the city in the past, the growth of other cities during the same period of time, and the growth of larger cities after they reached a population equal to that of Fitchburg as the present time.

The growth of Fitchburg from 1875 to 1910 is shown in Table 1.

TABLE 1.—GROWTH OF FITCHBURG FROM
1875 TO 1910.

Date	Population	Per cent Increase
1875	12,289	
1880	12,429	1.1%
1885	15,375	23.7%
1890	22,037	43.3%
1895	26,409	19.9%
1900	31,531	19.4%
1905	33,021	4.7%
1910	37,826	14.6%
Average rates of increase per period of 5 years,		18.1%

It is seen that the rate of increase of population has varied greatly from time to time, having been as low as 1.1 per cent during the five years ending in 1880 and over 43 per cent during the five years ending in 1890. The average of the rates of gain for each five years during the past thirty-five years has been 18.1 per cent.

A study has been made of the rate of increase in cities in Massachusetts, closely approximating the size of Fitchburg, between 1875 and 1910. For these studies ten cities were selected, five having a population greater than that of Fitchburg and five having a smaller population in 1875. The rate of

TABLE 2—Rate of increase in population of certain Massachusetts cities for five year periods from 1875 to 1910

Period	Salem	Chelsea	Taunton	Haverhill	Newton	Brockton	Malden	Pittsfield	Quincy	Everett	Average	Fitchburg
1875-1880	6.2	5.0	3.8	26.3	5.5	28.6	10.8	8.9	15.4	13.9	12.4	1.1
1880-1885	1.9	18.0	11.6	18.0	16.3	52.7	36.6	8.3	14.9	40.0	21.8	23.7
1885-1890	9.7	8.6	7.5	25.8	23.4	31.3	40.4	19.4	37.7	90.0	{ 29.4 22.6*	43.3
1890-1895	11.9	12.0	6.6	10.2	13.2	21.5	29.0	18.4	23.9	67.8	21.5	19.9
1895-1900	4.3	9.0	14.5	23.0	21.6	20.8	13.3	6.4	15.4	31.0	15.9	19.4
1900-1905	4.7	9.4	-0.2	1.8	9.7	19.3	13.0	14.9	17.5	19.6	{ 11.0 12.2†	4.7
1905-1910	6.1	-13.0	10.6	16.6	8.1	19.0	16.7	28.5	16.3	15.0	{ 12.4 15.2†	14.5
Average	6.5	7.0	7.8	17.4	14.0	27.6	22.8	15.0	20.2	39.6	{ 17.8 17.4§	18.1

* Omitting Everett

† Omitting Taunton

‡ Omitting Chelsea

§ Omitting Everett, Taunton, Chelsea, each for 1 five year period

growth of each year of these cities, as well as of Fitchburg, is shown upon Figure 2. The cities which were larger than Fitchburg in 1875 were Salem, Chelsea, Taunton, Newton and Haverhill. Of these Salem, Newton and Haverhill are now larger than Fitchburg, while Chelsea and Taunton are smaller. The relatively low population of Chelsea is due to the recent disastrous conflagration, but for which its population would probably have been slightly higher than that of Fitchburg in 1910. The cities of Brockton and Malden, which were smaller than Fitchburg in 1875, have increased at so great a rate that they are now larger. By comparing the lines on Figure 2 and the percentages in Table 2, it is apparent that Fitchburg has occupied a middle place throughout this period of thirty-five years, six cities having had a smaller and four a larger rate of growth.

A comparison has been made of the rates of growth of the largest ten cities in Massachusetts, Boston excepted, from the time each had a population equal to that of Fitchburg at the present time (37,826) to 1910. On Plate 1 lines have been drawn representing the numerical increase in population of these cities for every period of five years. From this diagram and from Table 3 it appears that Lowell, New Bedford and Springfield have maintained a more rapid rate of increase since they exceeded the present population of Fitchburg than before, while all of the other cities have had a somewhat lower rate of growth. The average rate of increase in these ten cities before they reached the present size of Fitchburg was 22.8%, while it was only 16.1% after that time. The average of the rates of increase in population in these cities, from 1865 and 1875 to 1910, are given in Table 3.

It appears that six of the cities have, on the average, materially exceeded 15% increase per period of five years, and two, Lowell and Lawrence, have had a rate of growth of less than 15%.

Upon Plate 1 a line has been plotted, based upon an estimated increase in population of Fitchburg of 15% during every five years. It will be noted that this line falls somewhat lower than those of the cities which have had the most rapid growth, while it rises above those which have had a smaller rate of increase: namely, Lowell, Cambridge, Lawrence and Holyoke.

CITY OF FITCHBURG
SEWAGE DISPOSAL COMMISSION

60 000

→

GROWTH OF SEVERAL MASS. CITIES

FROM 1875 - 1910

→

COMPARED WITH GROWTH OF
FITCHBURG

→

50 000

→

NOVEMBER 24, 1911

40 000

→

DAVID A. HARTWELL
HARRISON P. EDY
Chief Engineer
Consulting Engineer

30 000

→

Population

20 000

→

Newton

10 000

→

Waverhill

0

→

Salem

0

→

Chelsea

0

→

Jayton

0

→

Wellesley

0

→

Wellesley

0

→

Everett

0

→

Quincy

0

→

Pittsfield

0

→

Hanover

0

→

Lexington

0

→

Newton

0

→

Wellesley

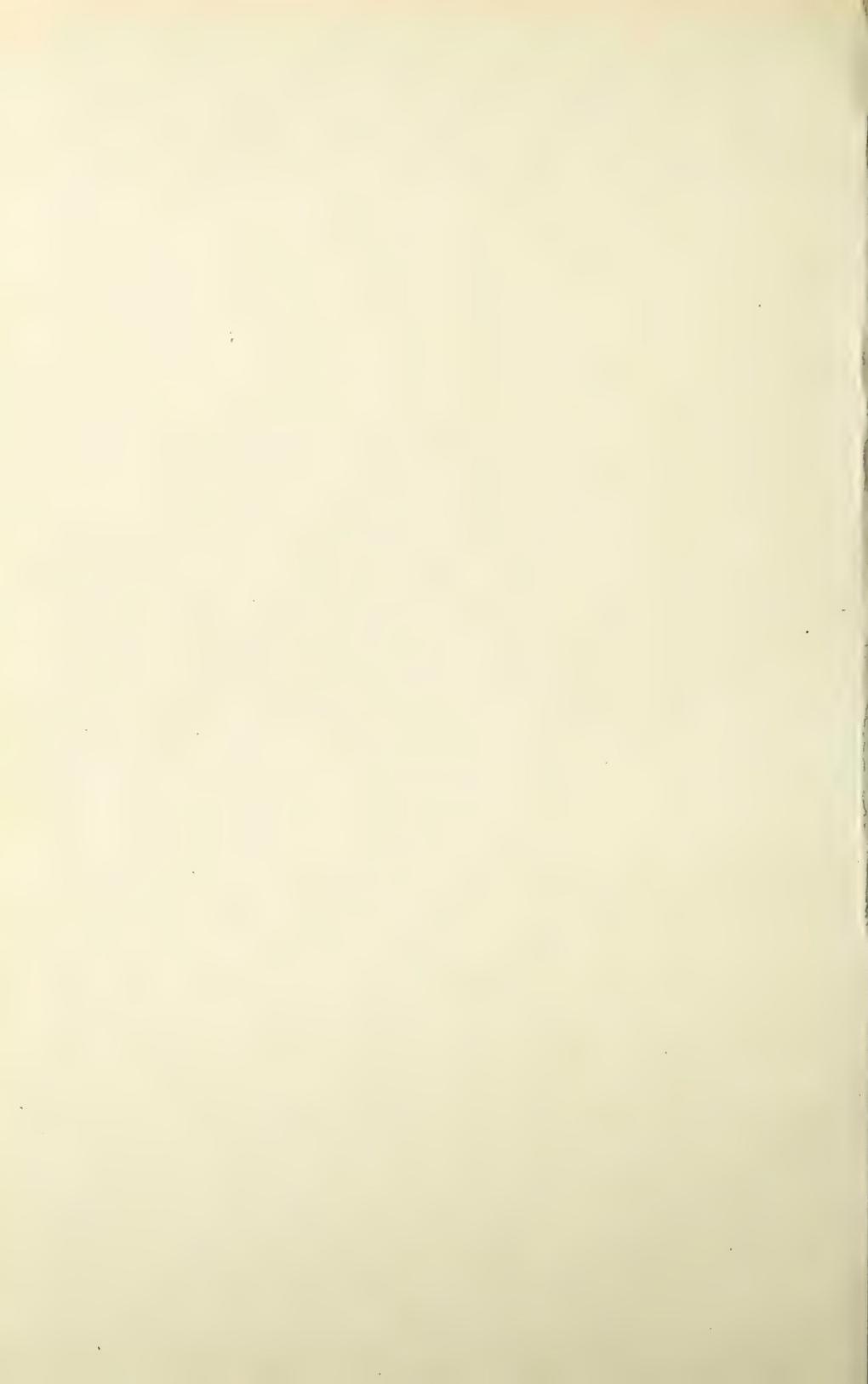


TABLE 3.

Rate of increase in population of ten cities of Massachusetts, both before and after reaching the 1910 population of Fitchburg (37,826), and the average for five year periods from 1865 and 1875 to 1910.

Name	End of five year period when nearest size of Fitchburg	Average rate of increase before that date †	Average rate of increase after that date to 1910	Average of rates of increase per period of five years	Period of Time
		Per cent.	Per cent.	Per cent.	
Worcester	1870	25	16.8	19.66	1865-1910
Fall River	1875	39.5	15.1	25.45	1865-1910
Lowell	1870	6.7	12.8	12.61	1865-1910
Cambridge	1870	27.4	13.0	15.58	1865-1910
New Bedford	1890	17.9	24.5	21.1	1875-1910
Lynn	1880	19.4	15.2	15.75	1875-1910
Springfield	1885	14.4	18.8	16.24	1875-1910
Lawrence	1880	22.3	14.3	13.94	1875-1910
Somerville	1890	29.3	18.0	19.95	1875-1910
Holyoke	1895	25.7	12.7	20.16	1875-1910
Average		22.8	16.1	18.04	
Fitchburg		14.6	15.0*		

* to 1940

† for period of 20 years before that date

Taking all conditions into consideration and giving due weight to the rate of growth of Fitchburg and other New England cities in the past, it seems probable that Fitchburg will hardly maintain as great a rate of growth in the next thirty years as it has in the past thirty-five years, and that a reasonable prophecy of the growth during the next thirty years will not exceed 15% per period of five years. The designs for the intercepting sewer have been based upon this assumed rate of increase in population, resulting in a population of 87,200 in 1940.

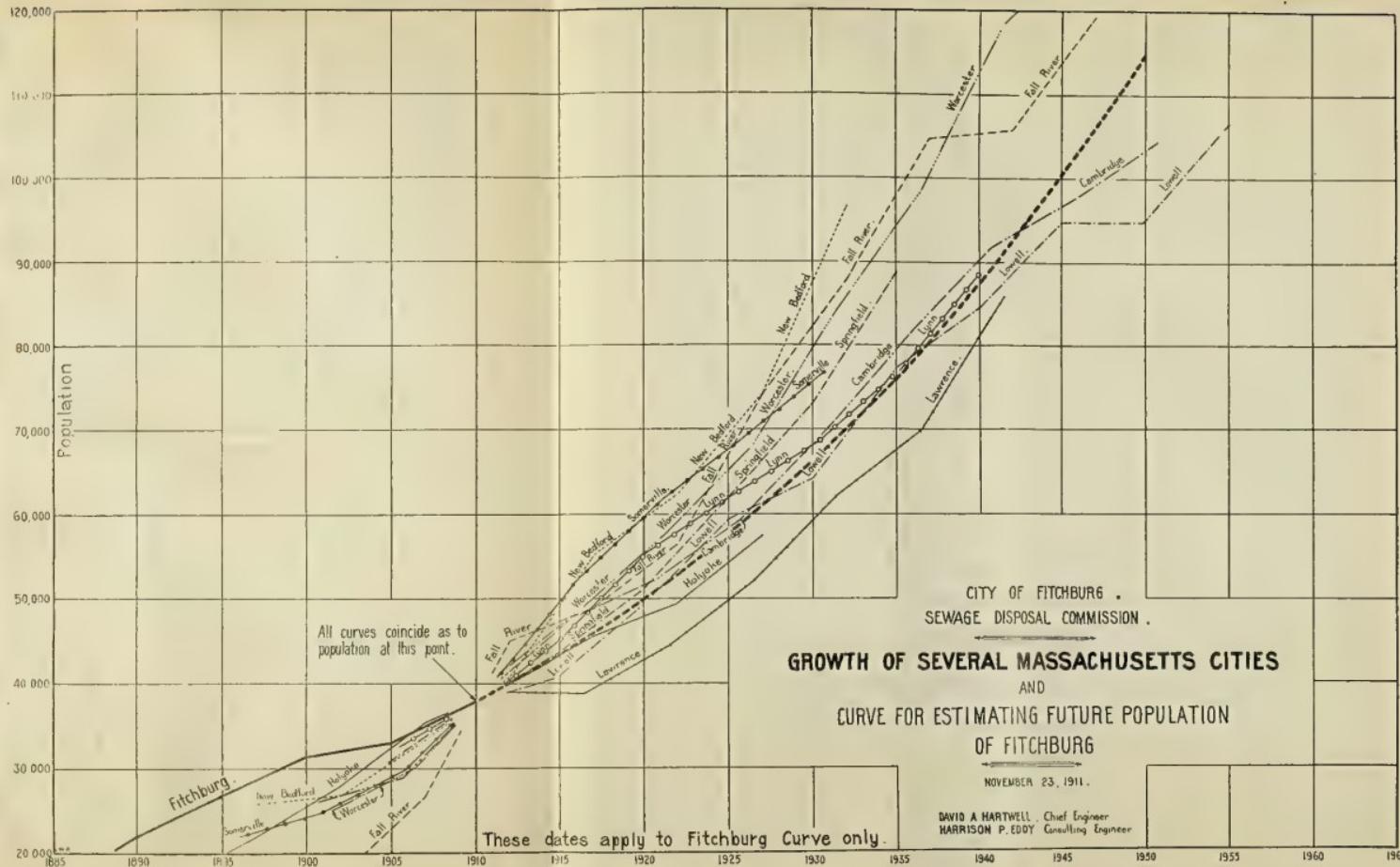
The estimated population at the end of each five years periods from 1910 to 1950 is given in Table 4.

TABLE 4.

Estimated Future Population of Fitchburg.
(15% increase each 5 years).

Date	Population
1910	37,826
1915	43,400
1920	49,800
1925	57,400
1930	66,000
1935	75,800
1940	87,200
1945	100,300
1950	115,000

Before leaving this subject attention should be called to the fact that in 1901 the late Freeman C. Coffin estimated the population of Fitchburg in 1950 at 165,000, and that in 1903, Mr. T. Howard Barnes estimated the population in 1950 at 145,000. These estimates were both made immediately after a period of twenty years, during which time the growth of Fitchburg had been very rapid and quite unusual, not only for Fitchburg, but for other cities of this state. The per cent increase in population for each five year period of this term of twenty years is given in Table 2. The average rate of increase during this period was 26.6%. This is a much higher rate of increase than has been maintained by any of the larger cities of Massachusetts during the period from 1865 to 1910, and does not appear at this



These dates apply to Fitchburg Curve only

NOVEMBER 23, 1911.

DAVID A. HARDWELL / Ch. 6 [5]

DAVID A HARTWELL, Chief Engineer
HARRISON P. EDDY Consulting Engineers

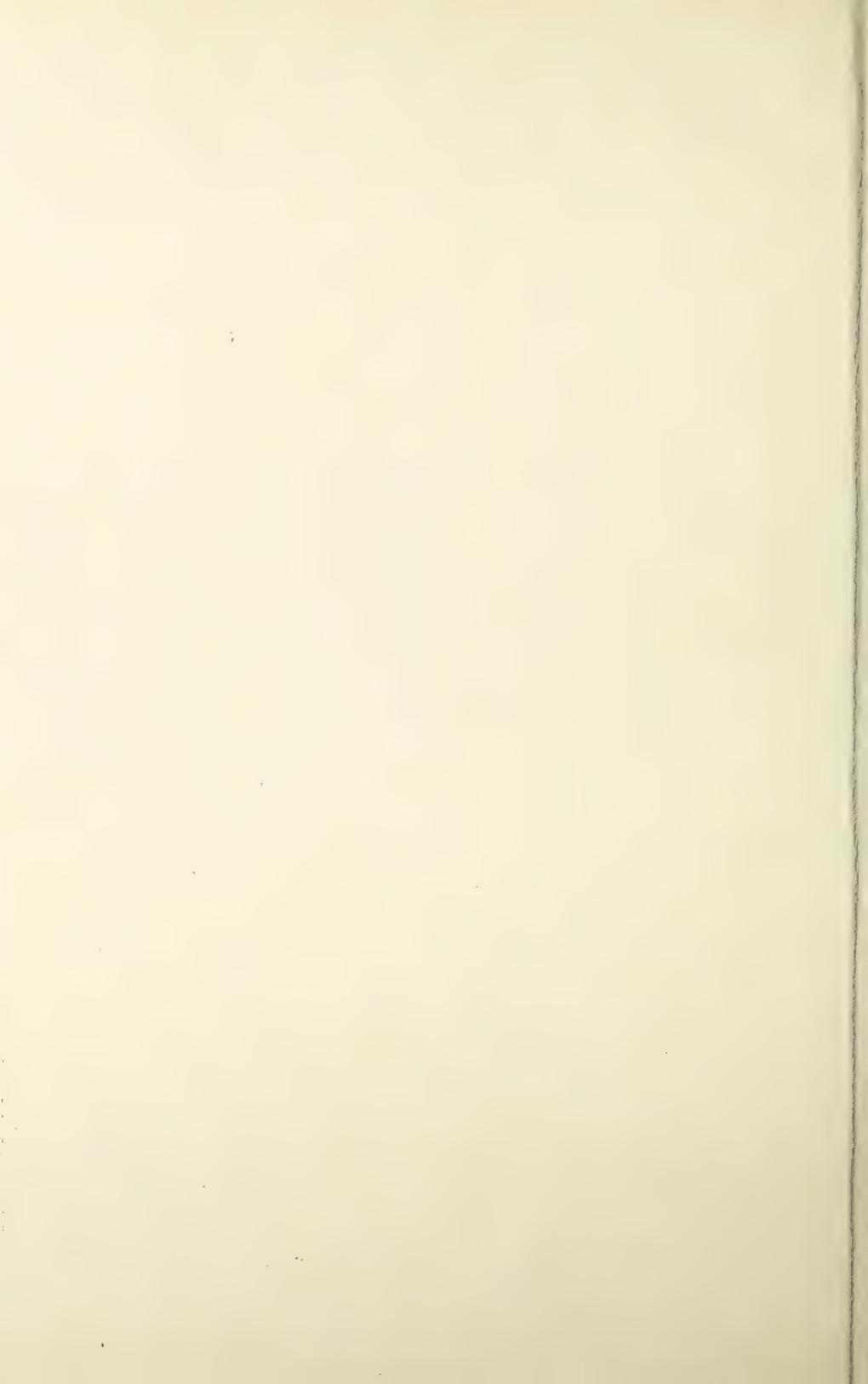
DAVID A HARTWELL, Chief Engineer
HARRISON P. EDDY Consulting Engineer

TABLE 5 ASSUMED RESIDENTIAL, INDUSTRIAL AND
TOTAL AREAS OF SEWER DISTRICTS
AS OF 1940.

DISTRICT NUMBER	RESIDENTIAL AREA IN ACRES	INDUSTRIAL AREA IN ACRES	TOTAL AREA IN ACRES
(1)	(2)	(3)	(4)
1	753.0	222.0	975.0
2	323.7	9.6	333.3
3	261.5	31.6	293.1
4	429.0	38.0	467.0
5	197.4	15.0	212.4
6	173.8	17.6	191.4
7	346.0	137.0	483.0
8	86.5	20.0	106.5
9	610.6	107.5	718.1
10	30.7	1.8	32.5
11	218.6	3.4	222.0
12	0.0	63.0	63.0
13	229.6	11.5	241.1
14	58.8	9.0	67.8
15	364.8	40.4	405.2
16	286.6	5.0	291.6
17	16.4	4.6	21.0
18	20.5	0.0	20.5
19	0.0	16.1	16.1
20	266.5	25.0	291.5
21	8.6	0.0	8.6
22	15.5	38.0	53.5
23	336.6	7.5	344.1
24	191.5	0.0	191.5
25	253.2	41.2	294.4
26	273.4	43.3	316.7
27	378.5	0.0	378.5
28	747.0	348.0	1095.0
TOTAL	6 878.3	1 256.1	8134.4

DAVID A. HARTWELL....Chief Engineer
HARRISON P. EDDYConsulting Engineer

Jan 17 1912



time to warrant an estimate as high as either of those above mentioned, which would require an increase of approximately 20.2 and 18.3% respectively.

PRESENT AND ESTIMATED FUTURE SEWERED AREA. In estimating the quantity of sewage likely to be received at the disposal works in the future a careful study has been made of the probable increase in the sewerized area. The estimates made are liberal and provide for all districts which it seems at all likely will be built up during the next 30 years. The area drained by sewers now built is approximately 2,000 acres. This, however, includes only that portion of the city actually sewerized, the area included being only that back to a line about 100 feet from each sewer. As a result of the study given to this problem it is estimated that the area of the districts which will be sewerized in 1940 will be 8,184 acres, equivalent to about 12.7 square miles. This area, however, is taken on a much more liberal basis than the area given as that served by existing sewers, and it is not probable that it will be completely sewerized. It represents rather the area of the districts which will then be tributary to the sewer system. The limits of the area served by existing sewers in 1911, and the assumed sewerized area in 1940, are shown by the solid and dotted red lines on Plate XI.

SEWER DISTRICTS. As the design of the sewer system depends largely upon topography, each valley being drained independently, it is necessary to define the limits of the main drainage areas. That portion of the city which, it has been assumed, will be sewerized in 1940, has been divided into twenty-eight sewer districts, which vary greatly in size. The area of each sewer district is given in Column 4 of Table 5.

Much larger quantities of water are used, and consequently larger quantities of sewage are produced, in mercantile and manufacturing districts than in purely residential sections. Such districts are relatively small in area and contain business blocks, mercantile houses and manufacturing establishments. They also generally contain some residences as it is not practicable to prescribe the boundaries in such manner as to entirely exclude them. After careful study of the natural and artificial conditions which favor manufacturing, certain areas have been

defined as comprising the present and probable future manufacturing districts. Obviously in this as in other estimates it is not possible to define these limits with great accuracy, but it is believed that the areas designated are ample for the period in question and that they will permit of great industrial expansion.

Nearly all of the sewer districts contain some area which will probably in the future be devoted to industrial works. The area in each sewer district, which it is estimated will be devoted to manufacturing or commercial works and to residential purposes, is given in columns 2 and 3 of Table 5.

The total residential area, as of 1940, has been assumed to be 6,878 acres, and the manufacturing area 1,256 acres. On this basis about 85% of the area will be devoted to residential purposes and about 15% to manufacturing or industrial purposes.

DENSITY OF POPULATION IN SEWER DISTRICTS. The quantity of sewage from the several sewer districts depends not only upon the area of these districts, but also upon the density of the population. It is therefore important to estimate as accurately as possible the population which will be served by the sewer system in each district.

The number of polls in each sewer district has been obtained from the printed lists, and by applying a factor determined by dividing the total population in 1910 by the total number of polls, it has been possible to estimate with approximate accuracy the distribution of the present population among the various sewer districts. The total population in each district and the corresponding density of population, or number of persons per acre, are given in columns 2 and 3 respectively of Table 6. The density of population varies greatly as from .3 in district No. 1, lying south of Waite's Corner, to 77.7 persons per acre, in district No. 21, a small area in the center of the city, which is the most densely populated of any district in the city.

It is probable that the density of population in district 21, as well as in district 18, will not increase as much in the future as that of the other districts. For this reason the population as of 1940 in these two districts has been estimated at 1,200 and 900 respectively, assuming a rate of growth somewhat smaller

TABLE 6 ESTIMATED POPULATION AND DENSITY
OF POPULATION IN SEWER DISTRICTS
IN 1910 AND 1940 .

DISTRICT NUMBER	ESTIMATED POPULATION IN 1910	ESTIMATED POPULATION PER ACRE IN 1910	ESTIMATED POPULATION IN 1940	ESTIMATED POPULATION PER ACRE IN 1940
(1)	(2)	(3)	(4)	(5)
1	280	0.3	659	0.7
2	190	0.6	436	1.3
3	350	1.2	821	2.8
4	960	2.1	2 271	4.9
5	1 210	5.7	2 858	13.5
6	130	0.7	304	1.6
7	640	1.3	1 521	3.2
8	80	0.8	182	1.7
9	5 200	7.3	12 338	17.2
10	320	9.9	750	23.1
11	380	1.7	902	4.1
12	430	6.8	1 014	16.1
13	1 360	5.6	3 224	13.4
14	1 280	18.9	3 031	44.7
15	5 500	13.6	13 078	32.3
16	3 330	11.4	7 898	27.1
17	60	2.9	142	6.8
18	770	37.6	1 200	58.6
19				
20	5 410	18.6	12 855	44.1
21	660	77.7	900	104.6
22	70	1.3	162	3.0
23	2 720	7.9	6 448	18.7
24	2 680	14.0	6 357	33.2
25	1 200	4.1	2 850	9.7
26	540	1.7	1 277	4.0
27	190	0.5	446	1.2
28	1 380	1.3	3 276	3.0
TOTAL	37 320	4.6	87 200	10.7

DAVID A. HARTWELL Chief Engineer
HARRISON P. EDDY Consulting Engineer.

J.A.L. C.W.R. Jan 17 1912

than that assumed for the remainder of the city. The density of population in these two districts in 1940, based on these estimates, will be 104.7 and 58.6 persons per acre respectively. In estimating the future population in all of the other sewer districts it has been assumed that the rate of growth will be the same as that of the entire city after deducting the increase in population in districts 18 and 21. The estimated density of population in each district in 1940 is given in column 5, Table 6.

WATER SUPPLY. The quantity of sewage produced by a city depends in part upon the water supply. Recent measurements indicate that the average quantity of water supplied to the city in the fall of 1910 was about 119 gallons per capita per day, while the maximum rate was equivalent to about 172 gallons per capita.

A large proportion of the water used by the city does not find its way into the sewers, some being used for locomotives and for steaming purposes in industrial plants and some for watering streets and sprinkling lawns and gardens. A portion leaks into the ground from the distribution system, and much of that which is used for domestic purposes is lost, in one way or another, so that it fails to reach the sewers. Furthermore, a substantial proportion of the water consumers, probably not far from 15%, are not served by the sewer system, consequently none of the water used by them reaches the sewers. In view of all the circumstances it seems fair to estimate that the average quantity of sewage which will be produced by the residential population will be about 75 gallons per capita per day. Obviously the consumption is much greater in the day time than at night and on certain days of the week than on others. After giving consideration to local conditions and to the maximum rates of water consumption in Fitchburg and other similar cities, the maximum rate of sewage flow from residential districts in Fitchburg has been estimated as 150 gallons per capita per day.

STORM WATER. Most of the sewers thus far built in Fitchburg, provide for both sewage and storm water. The act of 1910 requires that "the separation of the sewage from the storm water in said city (Fitchburg) shall be completed in

accordance with the provisions of Section 5 of the said Chapter 354." There seems to be reasonable grounds for questioning the desirability of making a complete separation of sewage from storm water. Such a scheme will require the construction of duplicate sewers in practically every street, and will also require many changes in existing plumbing, as well as more or less duplication of plumbing in buildings to be built in the future, wherever the roof water is to be conveyed to the storm drains. It will undoubtedly be desirable to build storm drains parallel to the sewers in many of the outlying districts where neither system is yet constructed.

In order to secure the benefits resulting from the purification of the sewage at as early a date as possible, it has been decided to build the intercepting sewer and the sewage disposal works before attempting to separate the sewage from the storm water. When this part of the work is completed the sewage from the existing combined sewers will be discharged into the intercepting sewer, through regulating gates, which will automatically close when the interceptor is full. When these gates are closed in this manner the sewage and storm water will flow past the interceptor directly to the river.

In this way it will be possible to treat all of the sewage in dry weather, and a portion of the combined flow of sewage and storm water in times of storm. The quantity of sewage which will be discharged into the river during storms will be relatively small, and will not cause its serious pollution.

While no specific allowance has been made for storm water, in the design of the intercepting sewers, the allowances for ground water and leakage have been made very liberal, so that if a small quantity of roof water is unintentionally admitted to the sewers it will not cause the interceptor to become overcharged. From the time when the intercepting sewer is completed, until the city reaches such a size as to produce enough sewage to tax its capacity, it will have a surplus capacity which may be used for a relatively small quantity of storm water. At the outset, the quantity of storm water which can be provided for in this manner will exceed that of the sewage, although it is not intended to convey the entire flow in the interceptor to the purification works, an overflow being provided at the upper end of the siphon, near the Hollow Mill, which will permit about

one-half of the flow collected by the interceptor above this point, to flow directly into the Nashua river.

GROUND WATER. It is very difficult to build water-tight sewers, and many of the present sewers are known to leak and admit substantial quantities of ground water. The amount of such leakage varies greatly from season to season, with the height of ground water. During rains and at times when snow is melting, material quantities of storm water may leak into the sewers through perforated manhole covers or around solid covers. In a city as large as Fitchburg there are usually some connections with admit storm water to the sewers even though it is the intention to prohibit such connections. Taking into account all the sources of leakage and the experience of other cities, it has been decided that provision should be made for an ultimate maximum rate of leakage of 1,960 gallons per acre per day, which is equivalent to about 74,000 gallons per day per mile of sewers, assuming the tributary area to be completely sewered.

INDUSTRIAL WASTES. The quantity of industrial wastes, which are likely to find their way into the sewers is most difficult to estimate. Fitchburg is unusually favorably situated to permit of discharging clean wastes into the river, and thus avoiding the necessity of providing for the disposal of such wastes through the sewer system. On the other hand the manufacturing sites along the river are now nearly all taken up and new plants will be likely to seek locations such that it may be necessary for the city to provide facilities for disposing of a reasonable quantity of industrial wastes. It has therefore been deemed wise to provide for a maximum rate of 8,000 gallons of industrial wastes per day per acre of area included in the manufacturing and mercantile districts. This rate is based upon the assumption that three quarters of the industrial wastes will be discharged during the working day of ten hours, which appears to be a fair assumption in most cities. This would not be a correct assumption for Fitchburg if all of the paper mill wastes were to be admitted to the sewers, which, however, is not probable. Assuming that three-quarters of the wastes will be discharged during ten hours, and that the maximum rate is

uniform during the ten hours and is equivalent to 8,000 gallons per acre per day of 24 hours, the quantity of industrial wastes to be expected is 4,444 gallons per acre of industrial area per day of 24 hours, equivalent to a total for the entire city of approximately 5,500,000 gallons daily, which would appear to be a liberal allowance for the period under consideration. This provision is in addition to that made for residential sewage and leakage.

QUANTITY OF SEWAGE FOR WHICH INTERCEPTING SEWERS SHOULD PROVIDE. As a result of the studies described, it appears that the maximum rate of flow for which the intercepting sewer* should provide will be about 39,000,000 gallons per day, equivalent to nearly 450 gallons per capita per day, for a population of 87,200 persons, assumed to be a reasonable estimate of the probable population of Fitchburg in 1940. The quantities of domestic sewage, ground water and industrial wastes for each district are given in Tables 7 and 8.

The basic data used in the design of the intercepting sewer may be summarized as follows:

Total residential area	6,878.3 acres
Total industrial area	1,256.1 acres
<hr/>	
Total seweried area	8,134.4 acres
Population	87,200 persons

Average density of population over whole area 10.7 persons per acre.

Maximum rate of domestic sewage flow 150 gallons per day per cap.

Maximum rate of leakage into sewer 1,960 gallons per day per acre.

Maximum rate of flow of industrial wastes for industrial area 8,000 gallons per day per acre.

*A portion of this quantity may be conveyed to low level purification works, or, by means of pumping, direct to the main purification works without first entering any portion of the intercepting sewer.

TABLE 7 ESTIMATED MAXIMUM RATE OF SEWAGE FLOW
INTO INTERCEPTER FROM SEWER DISTRICTS IN 1940

DISTRICT NUMBER	GALLONS PER 24 HOURS			
	DOMESTIC SEWAGE AT 150 GALLONS PER CAP. PER DAY	INDUSTRIAL WASTES AT 8000 GALLONS PER ACRE PER DAY	GROUND WATER & OTHER LEAKAGE AT 1960 GALLONS PER ACRE PER DAY	TOTAL MAXIMUM RATE OF SEWAGE FLOW
(1)	(2)	(3)	(4)	(5)
1	98 800	1 776 000	1 911 000	3 785 800
2	65 400	76 800	653 300	795 500
3	123 200	252 800	574 500	950 500
4	340 600	304 000	915 300	1 559 900
5	428 700	120 000	416 300	965 000
6	45 600	140 800	375 100	561 500
7	228 200	1 096 000	946 700	2 270 900
8	27 300	160 000	208 700	396 000
9	1 850 700	860 000	1 407 500	4 118 200
10	112 500	14 400	63 700	190 600
11	135 300	27 200	435 100	597 600
12	152 100	504 000	123 500	779 600
13	483 600	92 000	472 600	1 048 200
14	454 600	72 000	132 900	659 500
15	1 961 700	323 200	794 200	3 079 100
16	1 184 700	40 000	571 500	1 796 200
17	21 300	36 800	41 200	99 300
18	180 000		40 200	220 200
19		128 800	31 500	160 300
20	1 928 300	200 000	571 300	2 699 600
21	135 000		16 900	151 900
22	24 300	304 000	104 900	433 200
23	967 200	60 000	674 400	1 701 600
24	953 500		375 300	1 328 800
25	427 500	329 600	577 000	1 334 100
26	191 600	346 400	620 700	1 158 700
27	66 900		741 900	808 800
28	491 400	2 784 000	2 146 200	5 421 600
TOTAL	13 080 000	10 048 800	15 943 400	39 072 200

DAVID A. HARTWELL....Chief Engineer
HARRISON P. EDDY....Consulting Engineer

JAL
CWR. Jan. 17, 1912

TABLE 8 ESTIMATED MAXIMUM RATE OF SEWAGE FLOW
INTO INTERCEPTER FROM SEWER DISTRICTS IN 1940

DISTRICT NUMBER	CUBIC FEET PER SECOND			
	DOMESTIC SEWAGE AT 150 GALS. PER CAP. PER DAY	INDUSTRIAL WASTES AT 8000 GALS. PER ACRE PER DAY	GROUND WATER & OTHER LEAKAGE AT 1960 GALS. PER ACRE PER DAY	TOTAL MAX. RATE OF SEWAGE FLOW
(1)	(2)	(3)	(4)	(5)
1	0.15	2.75	2.96	5.86
2	0.10	0.12	1.01	1.23
3	0.19	0.39	0.89	1.47
4	0.53	0.47	1.42	2.42
5	0.66	0.19	0.64	1.43
6	0.07	0.22	0.58	0.87
7	0.35	1.70	1.46	3.51
8	0.04	0.25	0.32	0.61
9	2.86	1.33	2.18	6.37
10	0.17	0.02	0.10	0.29
11	0.21	0.04	0.67	0.92
12	0.24	0.78	0.19	1.21
13	0.75	0.14	0.73	1.62
14	0.70	0.11	0.21	1.02
15	3.04	0.50	1.23	4.77
16	1.83	0.06	0.88	2.77
17	0.03	0.06	0.06	0.15
18	0.28		0.06	0.34
19		0.20	0.05	0.25
20	2.99	0.31	0.88	4.18
21	0.21		0.03	0.24
22	0.04	0.47	0.16	0.67
23	1.50	0.09	1.04	2.63
24	1.48		0.58	2.06
25	0.66	0.51	0.89	2.06
26	0.30	0.54	0.96	1.80
27	0.10		1.15	1.25
28	0.76	4.31	3.32	8.39
TOTAL	20.24	15.56	24.65	60.45

DAVID A HARTWELL Chief Engineer
HARRISON P. EDDY Consulting Engineer

J.A.L.
JAN 17 1912

	Gallons per day	Per cent
Total maximum rate of flow of domestic sewage	13,080,000	33.5
Total maximum rate of flow of leakage	15,943,000	40.8
Total maximum rate of flow of industrial wastes	10,048,800	25.7
<hr/>	<hr/>	<hr/>
Total maximum rate of flow of sewage from all sources	39,071,800	100.0
Total maximum rate of sewage flow per capita	450	

In designing the intercepting sewer provision has been made for the maximum rate of flow during the day in that season of the year when the quantity of ground water and the leakage into the sewer system is the greatest.

QUANTITY OF SEWAGE FOR WHICH PURIFICATION WORKS SHOULD PROVIDE. Obviously the average rate of flow for which the purification works should provide will be very much less than the maximum rate upon which the size of the intercepting sewer is based.

The quantity of water supplied to the city in 1910 was found to be approximately 100 gallons per capita per day, and the measurements of flow which were made several years ago indicate that the normal flow of sewage is about equivalent to the water supply. It has therefore been decided to base the design of the purification plant upon an assumed quantity of sewage equivalent to 100 gallons per day per capita.

While certain portions of the plant, such as the influent and effluent conduits, will at first be built of sufficient size to accomodate the ultimate flow to be passed through the purification works, the tanks and filters will be built of capacity to provide only for a population of 55,000 persons, which will probably be reached about the year 1925. The normal quantity of sewage, upon which the designs are based, is 100 gallons per capita or 5,500,000 gallons per 24 hours. If the assumed rate of flow, of 100 gallons per day per capita, is correct for the present time, the quantity of sewage to be expected when the disposal

works are first completed will be approximately 4,000,000 gallons per day.

The maximum capacity of the siphon to be built at the outset will be approximately 14,000,000 gallons per day. This capacity will be reached only in time of storm. Provision will be made for passing this quantity of sewage and storm water through at least a portion of the purification plant. In time of storm the total flow delivered to the purification works will be three and one-half times the average rate of flow in 1912, and probably two and one-half times the average rate of flow in 1930, dependent upon the population of the city at that time.

The essential quantities of sewage which will be delivered to the purification works are estimated to be as follows :

	GALLONS PER DAY	
	1912	1925
Normal rate of flow	4,000,000	5,500,000
Maximum rate of flow 140% of normal	5.6	7.7
Minimum rate of flow 70% of normal	2.8	3.85
Maximum rate of flow, time of storm	14.2	14.2

HIGH AND LOW LEVEL DISTRICTS. Nearly all of that portion of the city which is now provided with sewers is at such an elevation that the sewage can be delivered to the disposal works by gravity, but a substantial portion of the assumed seweried area as of 1940, lies at an elevation so low that it will be necessary to pump the sewage to the disposal works or to construct auxiliary low level works to care for it. The low level districts lie in the easterly and southeasterly portions of the city, the largest being No. 28 which is the section naturally drained by Baker Brook and comprises nearly 1,100 acres, while the other districts, No. 25 and No. 26, in South Fitchburg, are relatively small. The total area of these three districts is 1706.1 acres, equivalent to about 21% of the assumed ultimate seweried area.

It is possible that the sewage from Districts No. 24 and No. 27 also may be pumped to the disposal area, although they lie at an elevation which will permit of their drainage to the main works by gravity. At the present time no sewers are built in district No. 27, but district No. 24, which may be defined as the district lying just west of Boutelle street, is almost com-

pletely sewer'd. If this district is served by a gravity outfall it will be necessary to conduct the sewage from a point near the intersection of Summer and Boutelle streets, through an inverted cast iron siphon laid in Summer street and Bemis Road, to the main interceptor at a point near the intersection of Bemis and Falulah roads. The sewage from district No. 27, which may be approximately defined as the area between Mechanic Street and Rindle road can be discharged into a sewer to be built through district No. 24, and thus conveyed to the branch inverted siphon connecting with the outfall sewer. The studies upon this local problem have not as yet been completed and it is possible that it may prove more economical in the end to pump this sewage than to convey it to the interceptor by means of a branch siphon. Should it finally be decided to treat the sewage from districts No. 24 and No. 27 with that from the low level area 378.5 acres will be added to the low level district, making its total area 2276.1 acres, equivalent to nearly 28% of the assumed ultimate sewer'd area.

The sewage from the Baker Brook district and districts No. 25 and No. 26, and possibly also districts No. 24 and No. 27 can be treated upon low level sand filter beds at the disposal area, or it can be pumped to the main disposal works as may, after detailed studies, appear to be the more economical and practical.

INTERCEPTING SEWER.

SECTION 1. Section 1 of the intercepting sewer will extend from the purification works across land owned by the city to Falulah road, thence in Falulah road to Bemis road, thence along the Nashua river to a point opposite the foot of Newton street, thence in land of the American Woolen Company between the mill and the location of the New York, New Haven & Hartford Railroad Company. From the purification works to a point opposite the foot of Newton street, the interceptor will be laid through land which lies at an elevation much lower than the tanks into which the interceptor will discharge, and it is therefore necessary to lay this portion of Section 1 as an inverted siphon, which will be about 5,000 feet in length. The siphon will be of cast iron pipe and will pass under the Nashua river at

a point near the northerly boundary line of the disposal area purchased by the city, and it will pass under the tail race in Falulah road at Sheridan street and under the head-race near the intersection of Falulah and Bemis roads.

The upper portion of Section 1, about 900 feet in length, will be 48 inches in diameter, having a slope of one in one thousand and will be built of concrete. At the lower end of this concrete section a siphon chamber will be constructed, through which the sewage will flow into the cast iron pipe inverted siphon. From this chamber there will be provided an overflow sewer, 24 inches in diameter, extending to the Nashua river.

The capacity of the 48-inch interceptor above the siphon chamber will be approximately 46 cubic feet per second, sufficient for the ultimate needs of that portion of the city lying west of Arden Mill. For a number of years, however, its capacity will be reached only in times of storm.

In order to provide a sufficient velocity in the siphon to assure its freedom from deposits, it will be necessary to provide two or more pipes so that low flows may be confined to a single pipe and thus a relatively high velocity maintained. A consideration of the average and maximum quantities of sewage which will be delivered by the 48-inch out-fall sewer during the next fifteen years, indicates that it will be wise to construct the siphon of two pipes, one 30 inches in diameter and the other 36 inches in diameter. It will not be necessary, however, to provide more than one of these pipes until the city has far exceeded its present size,—probably not until after 1925 or 1930, at which time the population should have reached about 60,000 persons, and it is possible that it may be deferred for a still longer period.

It has therefore been decided to construct one cast iron pipe siphon 30 inches in diameter and to build an overflow sewer from the siphon chamber to the Nashua river, to provide for the discharge of the surplus sewage delivered by the 48-inch out-fall in times of storm. The 30-inch siphon will have a capacity, under ordinary conditions, of about 11 million gallons per day, and under maximum conditions, as when the 48-inch interceptor is running full, it will have a capacity of about 12 million gallons per day. The velocity of flow through this siphon during ordinary dry weather, when the rate of sewage

flow is from four to six million gallons per day, will be from 1.26 to 1.89 feet per second. While these velocities are ample for the maintenance of a clean pipe were the separate system already installed, it is probable that there will be more or less deposit of heavy gravel and sand during and immediately following severe storms, if provision is not made to intercept such materials before they reach the siphon. For this reason, a grit chamber so designated as to retain only gravel and coarse sand, will be constructed upon the line of the intercepting sewer in the storage yard on Water street, recently purchased by the city. This will prove an advantageous location for a grit chamber as it can be conveniently inspected from time to time by employes of the department stationed at headquarters and it can be cleaned when necessary from within the storage yard.

As an additional precaution, a blow-off pipe, 30 inches in diameter, with necessary gate, will be provided at a point where the siphon crosses under the Nashua river. By opening the gate upon this blow-off pipe a velocity of flow of over eight feet per second can be maintained in the siphon in times of storm when sufficient storm water will be available and any sand or detritus which may have been deposited in it can thus be flushed out into the river. It will probably be necessary to use this blow-off, but rarely and only in times of storm when storm overflows into the river will be taking place throughout the city. A branch will be set in the 30-inch cast iron siphon near the intersection of Bemis and Falulah roads, with which can be connected a branch siphon to be laid in Bemis road and Summer street to a point near the intersection of Summer and Boutelle streets to serve districts No. 24 and No. 27.

At such time as the quantity of sewage is found to have increased sufficiently to overtax the 30-inch siphon, an additional pipe can be laid between the siphon chamber and the disposal works. The size of pipe then laid will depend upon the probable future growth of the city. If it is then decided to make the same provision which is now planned for the future, this pipe will be 33 or 36 inches in diameter.

SECTION 2A.—This section of the intercepting sewer will extend to a point opposite the Arden Mill of the American Woolen Company, through the mill yard to and across the New

York, New Haven and Hartford Railroad location to Water street; thence along Water street to the Sewer Department storage yard; thence through said yard and across private land to Middle street; thence from Middle street to and under the Nashua River, connecting with the lower end of Section 3. The maximum rate of sewage flow which this section, Station 62+30—Station 91, must provide for, will be as follows:—

Quantity received from Section 3	37.17 c. f. s.
District No. 20	4.18 c. f. s.
District No. 21	.24 c. f. s.
District No. 22	.67 c. f. s.
District No. 23	2.63 c. f. s.
 Total	 44.89 c. f. s.

The sewage from district No. 20, and probably from districts No. 21 and No. 22 will be discharged into the upper end of this section, while that from district No. 23 will be discharged into it at a point near Fifth street. The elevation of the upper end of Section 1 at Station 62+30 will be 398.1 and the elevation of the upper end of Section 2a at Station 91 will be 406,—the total fall or slope being 7.90 feet equivalent to 1 in 363. A sewer 40 inches in diameter laid on this grade would have a capacity of 47.0 cubic feet per second, which would provide for the quantity of sewage likely to be tributary to this section. However, the borings indicated that ledge would be encountered between Stations 63+30 and 72 if this section of sewer were laid on a straight grade from its lower end to its upper end. It was, therefore, decided in order to avoid as much excavation of ledge as possible, to increase the size to 48 inches in diameter, which if laid on a slope of one in one thousand will have a capacity of 46.3 cubic feet per second.

The sewer will be round and the velocity when flowing full, or half full will be 3.7 feet per second. It will be built of concrete and where necessary will be reinforced with steel rods.

Between Stations 62+30 and 63+30 there will be a fall of 4.93 feet. When the sewer is running half full, or full, the sewage in this short section of 100 feet will have a velocity of 26 feet per second. This velocity is so high that there will be

danger of the erosion of the concrete invert and for this reason it will be protected by a vitrified brick lining.

From a point in the driveway of the Arden Mill to a point a short distance easterly of Fifth street, the sewer will be less than 20 feet in depth and will probably be constructed in open cut. From the upper end of this section to a point on the south bank of the Nashua river, the sewer will be laid at a depth of from 30 feet to 50 feet below the surface of the ground, and will be constructed in tunnel. From the northerly end of this tunnel the sewer will be constructed across the Nashua river in trench, the top of the concrete structure being only slightly below the present bed of the river. The thickness of the concrete where laid under the bed of the river, will be increased from 6 to 9 inches at the crown of the sewer and the structure will be reinforced with transverse and longitudinal steel bars.

From a point a short distance south of Fifth street to the southerly bank of the Nashua river, the sewer will be laid in tunnel through rock which it is believed will prove to be sufficiently sound and compact to make timbering of the tunnel unnecessary. Where the sewer is laid in rock tunnel and where timbering proves to be unnecessary, the thickness of the concrete section may be reduced to 6 inches and will serve merely as a lining for the rock tunnel.

SECTION 3.—This section of the interceptor extends from a point near the north bank of the Nashua river about 250 feet east of Water street along the river and in private ways near the river, to Putnam street. The maximum ultimate rate of flow in this section is estimated to be as follows:—

Received from Section 4	28.89 c. f. s.
Received from District No. 15	4.77 c. f. s.
Received from District No. 16	2.77 c. f. s.
Received from Disirict No. 17	.15 c. f. s.
Received from District No. 18	.34 c. f. s.
Received from District No. 19	.25 c. f. s.
Total	37.17 c. f. s.

The total available fall between the upper and lowers ends of section 3 is 22.23 feet. The smallest sewer laid on a straight grade between the Nashua river near Water street and Putnam

street, which will provide for the maximum rate of flow, is 33 inches in diameter. Numerous borings along the line of the proposed sewer were made prior to the decision as to size and they indicated that fine running sand and ledge would be encountered in the excavation, if the sewer were laid at a straight grade as suggested. Therefore it was finally decided to keep the sewer as high as possible and flatten the grade. This made it necessary to build a sewer 45 inches in diameter. It is probable, however, that the cost of this sewer was much less than would have been the cost of a 33-inch sewer laid at the greater depth, which would have been necessary if this sewer had been of this size. The minimum grade of the 45-inch sewer is one in one thousand, and the velocity of flow in it will be approximately 3 feet per second when running full.

Between Stations 104+50 and 105, in the bed of the river, a short distance south of Laurel street, there is a fall in the grade of the sewer amounting to 1.6 feet, and between Stations 112 and 113 there is a fall in the grade of the sewer of 6.45 feet. At each of these places the velocity of flow will be so great as to cause serious wearing of a concrete invert, and for that reason this portion of the sewer invert is lined with vitrified brick.

The sewer is built, for the most part, of plain Portland cement concrete, although portions of the structure are reinforced with transverse and longitudinal steel bars. Wherever the sewer crosses in the river, or is laid in the bed of the river, the thickness of the concrete is increased, the crown thickness being increased from six to nine inches.

CONSTRUCTION IN 1911.

As soon as preliminary studies were sufficiently completed to make certain the size of the intercepting sewer it was deemed advisable to build some portion of the sewer during 1911. It being impossible to definitely settle the data relative to the main sewer at the disposal works until further studies were made relative to that phase of the sewerage problem, it was decided to attempt construction at first on that part of the sewer in the central portion of the city. The most feasible location with reference to speed in which plans and specifications could be prepared seemed to be that described below as Section 3 and

accordingly work preparatory to advertising for proposals was concentrated on that section.

SECTION 3, INTERCEPTING SEWER. This section is located between Station 91+00 at the Nashua river near the Dillon Steam Boiler Works and Station 120+27.66, a point 10 feet east of Putnam street. The size of the sewer is 45 inches circular and the length is 2927.66 feet. The location was almost wholly in private land or in private passways, only about 190 feet, being in a public way, Water street. The material excavated was largely sand and gravel, excepting in the river bed where it was clay. Very little rock excavation was found outside much granite foundations of removed buildings west of Cushing street. Owing to the porous nature of the material and the depth below water level much ground water was encountered in the land of the J. Cushing estate, not only when crossing the river but also for considerable distances each side. About 900 feet of the excavation was handled with a cable-way, about 300 feet with a stiff leg derrick and about 830 feet with a Carson trench machine. The balance, being that part in the river bed, was excavated by hand and the material thrown to one side of the trench. The greatest depth of excavation to bottom of underdrain was 20 feet.

The standard section of sewer in this contract was built of plain concrete with a thickness of six inches at both invert and crown and about ten inches at springing line of the arch. Where the sewer was in the bed of the river or adjacent to the river there was such a probability of the seepage of a large amount of ground water that the thickness at the invert and crown was made nine inches and additional thickness added proportionally throughout the cross section. Reinforcing bars of twisted steel were also added to eliminate so far as possible the liability of seepage. In this contract a distance of 1250 feet was built with the thicker section and steel bars. For the greater part of the sewer built in this contract the grade was one in 1000 which would give a maximum velocity of about 3.35 feet per second. Where there was such a change in grade as to greatly increase the velocity the invert was lined with a single course of vitrified brick. This was done for a distance of about 745 feet. The cement used on this contract was Lehigh.

Screened bank sand and screened gravel and broken granite were used for the concrete. All mixing was done by hand.

Proposals for this section were received July 11, 1911, and on July 13 the contract was awarded to the lowest bidder, McCarthy & Walsh of East Boston. Work was started at once in assembling necessary equipment and actual excavation was begun July 26. The first concrete was placed August 11 and the last concrete on October 30. The contract called for completion on November 15, 1911, and the work was completed a few days earlier.

Wooden forms were used for all concrete in this contract. The completed sewer is very smooth and will allow for a free flow of sewage fully as good as the best grade of brick work.

The following table gives the itemized proposals received July 11, 1911, for building Section 3 of the main intercepting sewer.

TABLE 9—MAIN INTERCEPTING SEWER, SECTION 3, BIDS RECEIVED JULY 11, 1911.

Item	Work and Material	Quantities	McCarthy & Walsh East Boston, Mass.	Geo. W. Carter Co., Worcester, Mass.	C. E. Trumbull Co., Boston, Mass.	Joseph Long & Co., Leominster, Mass.	Mooré & Company, Boston, Mass.	Littell & Sonderer, Leominster, Mass.	Frank H. Cowin Co., Boston, Mass.	Connors Bros., Co., Lowell, Mass.	
1a	Excavation and refilling trench	1,250 lin. ft.	\$7 90	\$5 98	\$10 58	\$9 00	\$8 30	\$12 00	\$14 50	\$14 50	\$7 25
1b	Excavation and refilling trench	850 lin. ft.	5 64	6 40	5 42	5 50	5 10	9 50	10 50	12 00	40 00
1c	Excavation and refilling trench	827.66 lin. ft.	8 34	6 25	10 56	10 00	8 80	12 00	15 00	14 50	10 00
2	Rock excavation in trench	50 cu. yds.	6 00	12 00	6 00	6 00	10 00	15 00	7 00	10 00	8 00
3	Brick masonry in invert	490 sq. yds.	2 50	3 12	2 25	2 50	12 00	3 50	5 00	3 00	3 35
4	Brick masonry in manholes	23 cu. yds.	15 00	10 35	16 00	15 00	18 00	16 00	17 00	20 00	19 00
5	Concrete masonry in trench	1,250 cu. yds.	8 00	10 51	8 44	10 00	11 50	13 00	14 50	15 00	12 00
6	Deformed steel bars	40,000 lbs.	0 025	0 06	0 03	0 04	0 05	0 04	0 05	0 06	0 05
Totals			\$34,441 68	\$35,392 23	\$40,092 59	\$40,171 60	\$45,162 41	\$53,639 92	\$62,780 90	\$63,906 07	\$70,817 60

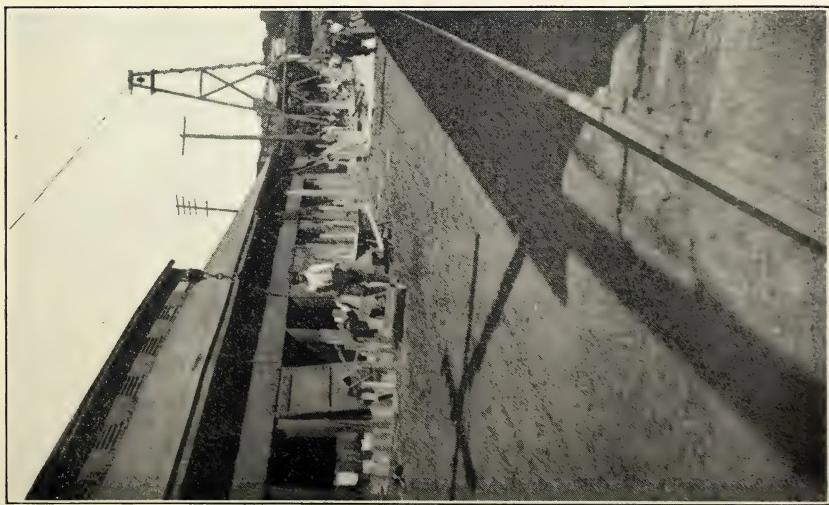
The cost of section 3 of the main intercepting sewer including the amount payable to McCarthy & Walsh and the supplies furnished by the commission is shown in the following table:

TABLE 10.

Total cost of Construction of Section 3, Main Intercepting Sewer

Item	Work and Material	Quantity	Unit Price	Total
1a	Excavation and refilling trench	1,245 ft.	\$7 90	\$9,835 50
1b	Excavation and refilling trench	850 ft.	5 64	4,794 00
1c	Excavation and refilling trench	829 ft.	8 34	6,913 86
2	Rock excavation in trench	93 02 yds.	6 00	558 12
3	Brick masonry in invert	487.23 yds.	2 50	1,218 08
4	Brick masonry in man-holes	19.69 yds.	15 00	295 35
5	Concrete masonry in trench	1,287.62 yds.	8 00	10,300 96
6	Deformed steel bars	49,295 1 lbs.	.025	1,232 38
7	Lumber left in place	85,168 ft. B. M.	15 00	1,277 58
8	Extra work			477 82
Total for Contractor				\$36,903 59
Additional cost to city				
Pipe for underdrain, etc.				428 60
Castings for manholes				107 33
Miscellaneous supplies				96 80
Total cost				\$37,526 32

TRENCH EXCAVATION AT STATION 96 | 00
WITH CABLE WAY



TRENCH EXCAVATION AT STATION 103 | 50
WITH STIFF LEG DERRICK

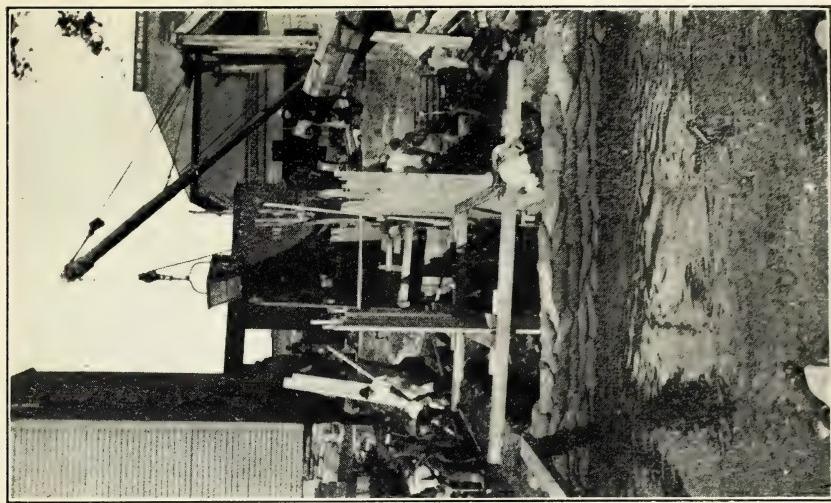
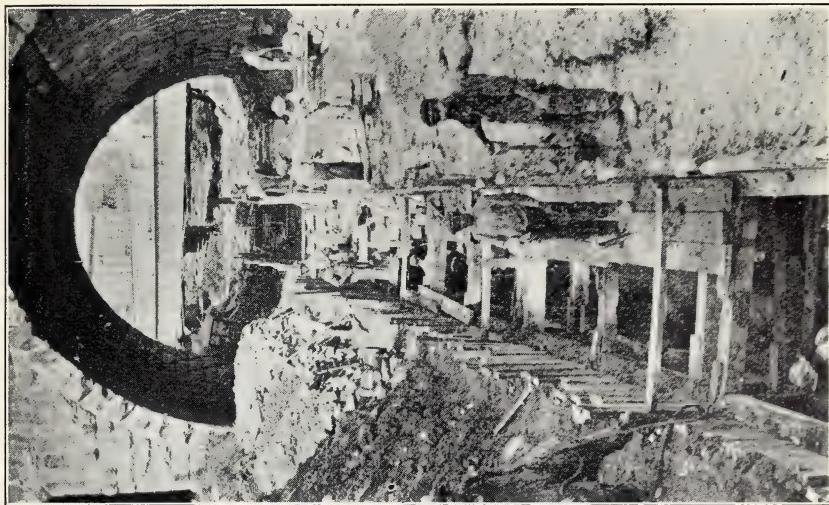
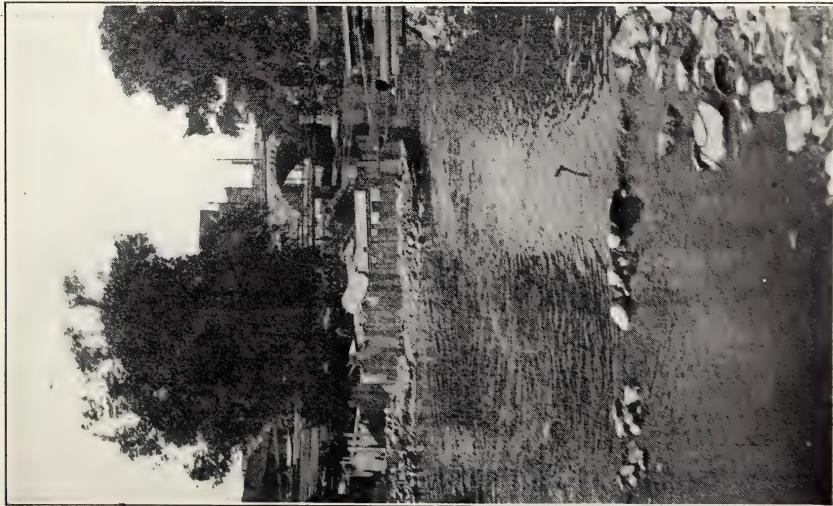


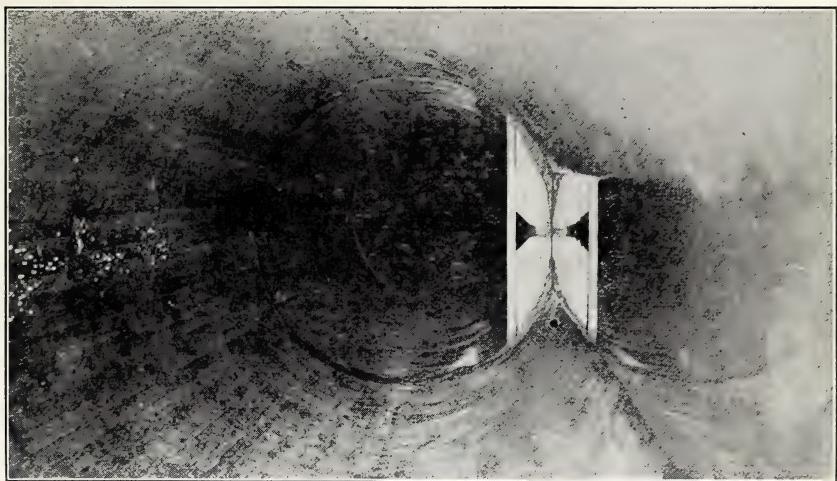
PLATE II.



RIVER CROSSING AT STATION 104

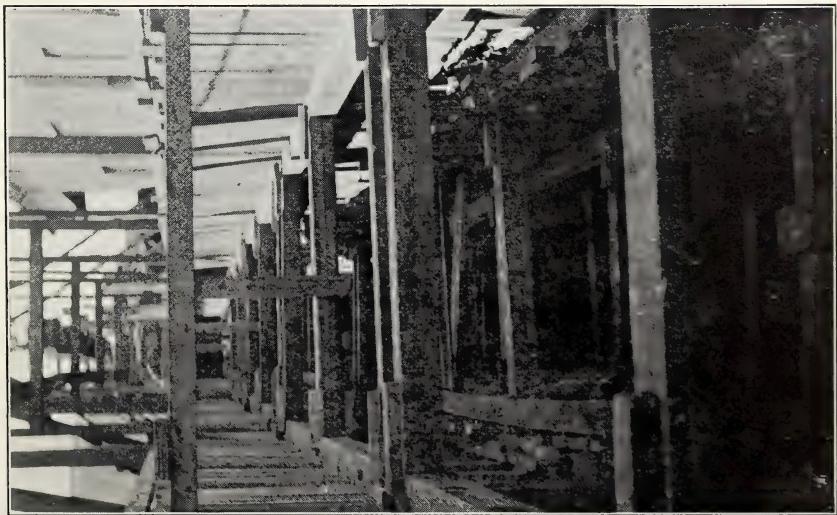


SEWER TRENCH IN RIVER BED BELOW
LAURET STREET ARCH BRIDGE



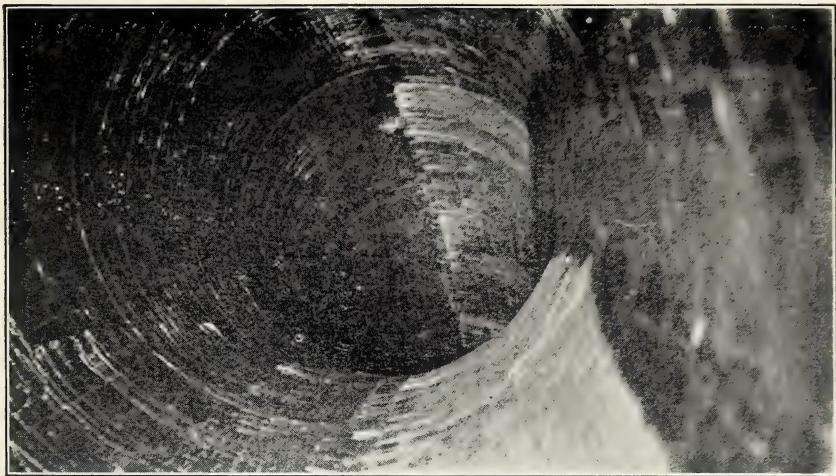
WEIR AT STATION 93+00 TO ASCERTAIN GROUND
WATER LEAKAGE. 45 INCH SEWER

PLATE IV

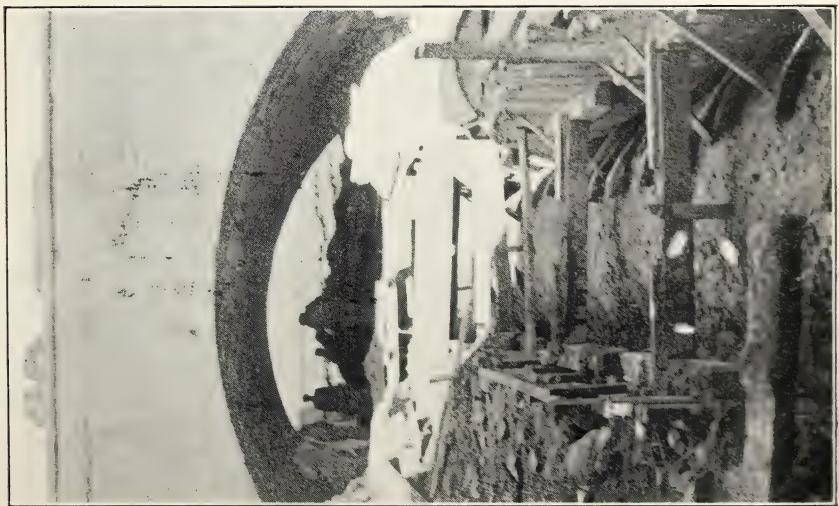


BRAKING IN 18-FOOT TRENCH NEAR
STATION 112+40

45 INCH SEWER AT STATION 111+70



FINISHED SEWER IN RIVER BED NEAR CUSHING
STREET BRIDGE





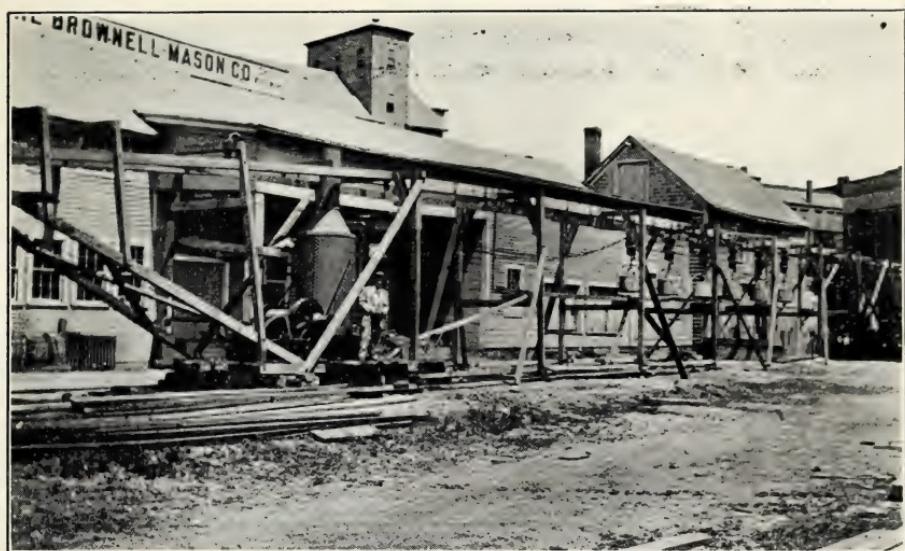


RIVER CROSSING IN CUSHING POND AT STATION 116+50



WOODEN FORMS USED ON SECTION 3

PLATE VI.



EXCAVATING WITH CARSON MACHINE AT STATION 114



SEWER TRENCH IN RIVER BED AT BOSTON AND MAINE RAILROAD

JUNCTION OF BRICK AND CONCRETE INVERTS
AT STATION 113+00



BRICK INVERT IN RIVER BED AT
STATION 104+70



SECTION 2A. INTERCEPTING SEWER. This section is located between Station 62+30 in land of the American Woolen Co. and Station 91+00 at the southerly end of Section 3, a distance of 2870 feet. The location of the sewer for this section was first planned through land owned by the American Woolen Co., the Geo. W. Wheelwright Paper Co., and the Fitchburg Gas & Electric Light Co., and in the bed of the river, but early in the work on this location considerable opposition developed on the part of the owners of the land. Desiring to avoid dissatisfaction on the part of individuals or corporations which might lead to extended litigation other possible locations for the main sewer were considered between these termini. The most feasible alternate location seemed to be that finally adopted and described further on. The line through land owned by the corporations above named could have been built wholly by open trench work and so would have cost much less a linear foot to build and it seemed after much study to be the only satisfactory line without a tunnel. Comparing a tunnel location in Middle street with an open trench location on private land, the tunnel line was 720 feet shorter and much more expensive to build, yet it seemed probable that the additional length of line on private land with the damages to be paid for easements would more than make up for the more expensive tunnel construction. With this uncertainty it was decided to advertise for and receive proposals for both locations and leave the final adoption of the line until such proposals could be canvassed.

Proposals for these two locations were received August 15 and were as follows, Section 2 being the line on private land and Section 2A being the tunnel location in Middle street.

TABLE 11.
Main Intercepting Sewer, Section 2. Bids received August 15, 1911.

Item	Work and Material	Quantities	C. E. Trumbull Co., Boston, Mass.	A. G. Tomassello Co., Dorchester, Mass.	Geo. W. Carter Co., Leominster, Mass.	John J. Flaherty, Somerville, Mass.	James D. Kelley, Dorchester, Mass.	Gleman Brothers Boston, Mass.
1a	Excavation and refilling trench,	1,500 lin. ft.	\$3.70	\$2.45	\$3.06	\$4.44	\$3.50	\$6.60
1b	Excavation and refilling trench,	845 lin. ft.	4.70	7.82	9.67	8.08	8.00	15.00
1c	Excavation and refilling trench,	573 lin. ft.	7.20	8.62	9.78	12.49	15.00	9.00
1d	Excavation and refilling trench,	562 lin. ft.	6.70	14.92	9.07	9.00	15.00	11.75
2	Rock excavation in trench,	1,029 cu. yds.	4.00	5.00	7.00	6.00	5.00	6.00
3	Earth excavation below grade,	600 cu. yds.	2.00	60	.75	1.25	2.00	3.00
4	Gravel filling below grade,	750 cu. yds.	1.50	1.30	1.25	1.00	1.00	1.50
5	Darth filling in embankment,	4,550 cu. yds.	1.00	70	.50	.78	1.00	1.00
6	Brick masonry in invert,	84 sq. yds.	2.50	3.00	4.34	2.50	3.00	6.00
7	Brick masonry in manholes,	25 cu. yds.	15.00	16.00	17.00	16.00	15.00	20.00
8	Concrete masonry in trench,	1,560 cu. yds.	9.00	10.25	11.00	11.82	10.50	10.00
9	Deformed steel bars,	54,000 lbs.	.05	.04 $\frac{1}{4}$	.04	.03	.04	.04 $\frac{1}{2}$
10	Channel for brook crossing. Station 61+90	1	350.00	300.00	200.00	300.00	600.00	1,000.00
11	Extension of sewer. Station 60+55.	1	100.00	75.00	65.00	61.50	150.00	200.00
12	Extension of sewer. Station 58+65,	1	100.00	75.00	65.00	61.50	160.00	200.00
Totals			\$46,709.50	\$53,841.10	\$44,503.79	\$58,518.17	\$61,352.00	\$62,112.40
								\$70,557.00

TABLE 12

Main Intercepting Sewer, Section 2A. Bids received August 15, 1911.

Item	Work and Material	Quantities	Little & Seretto, Leominster, Mass.	James D. Keller, Dorchester, Mass.	A. G. Tomassello, Dorchester, Mass.	Coleman Brothers, Boston, Mass.
1a	Excavation and refilling trench	1,220 lin. ft.	\$6 84	\$9 00	\$6 75	\$7 00
1b	Earth and rock tunnel	1,570 lin. ft.	15 85	17 50	23 75	37 50
1c	Excavation and refilling trench	80 lin. ft.	15 50	15 00	20 00	20 00
2	Rock excavation in trench	850 cu. yds.	6 00	4 00	5 00	6 00
3	Brick masonry in invert	70 sq. yds.	4 34	3 00	3 00	6 00
4	Brick masonry in manholes	10 cu. yds.	17 00	15 00	16 00	20 00
5	Concrete masonry in trench	520 cu. yds.	11 00	10 00	9 00	10 00
6	Concrete masonry in tunnel and tun. manholes	650 cu. yds.	15 00	12 00	15 00	15 00
7	Deformed steel bars	4,000 lbs.	.04	.04½	.04½	.04
8	Lumber left in place	70,000 ft. B.M.	20 00	30 00	15 00	25 00
			\$57,073 10	\$58,695 00	\$67,402 50	\$91,595 00

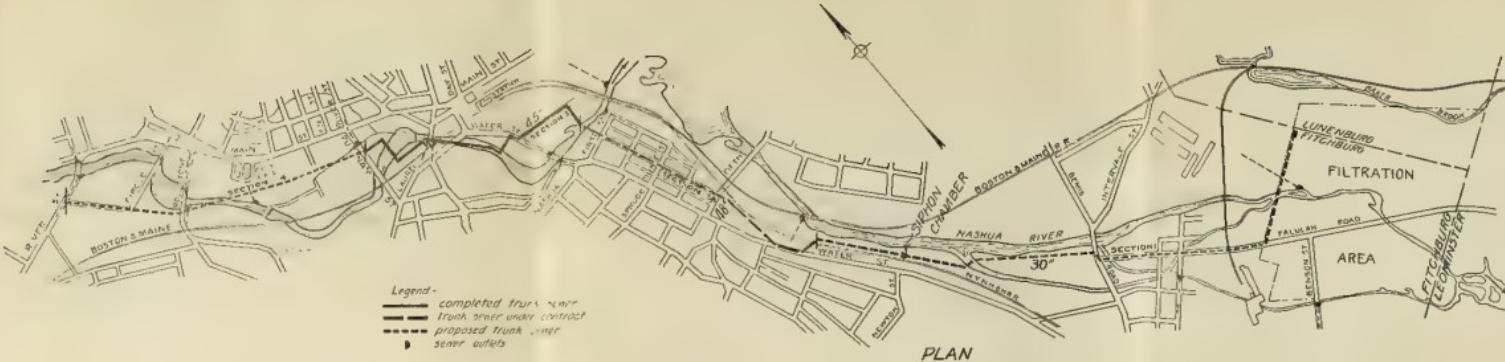
The canvass of these proposals showed a difference between the lowest bidders of \$10,363.60 in favor of Section 2, but from the information gathered at interviews with the representatives of these corporations it was believed that the construction of the tunnel line would result in a less total expenditure. Finally it was decided to build on the tunnel location and on August 25 the contract was awarded to Little & Seretto, the lowest bidders.

This section is located on the land of the American Woolen Company and the location of the New York, New Haven & Hartford Railroad Company from Station 62+30 to Station 64+49; in Water street from Station 64+49 to Station 67+96; on land of the city from Station 67+96 to Station 72+44; on land of the New York, New Haven & Hartford Railroad Company from Station 72+44 to Station 75+18; in Middle street from Station 75+18 to Station 89+27 and in private land and in the river bed from Station 89+27 to Station 91+00.

Borings taken on this location indicated that rock excavation of varying depths would be necessary on nearly the whole length of the section and the depth in Middle street would be so great that a tunnel would be more economical than open trench. The plans and specifications were made with the expectation that about 1570 feet of this contract would be in tunnel and the balance of 1300 feet would be in open trench. So far as work has been done on this contract the material excavated outside of filled land has been clay and rock. The rock is not dense but is much broken both as to strata and in each stratum. These strata lay at an angle of about 30° from horizontal. The greatest depth of excavation in open trench is about 30 feet and the greatest depth of sewer invert in tunnel below the surface of Middle street is 43.5 feet.

The excavation and construction on the open trench work has been handled with a Carson trench machine. On the tunnel and shafts the excavated material and concrete will be taken from and lowered into place in buckets by a stationary hoisting engine and stiff leg derrick. An air compressor is being installed for operating the power drills in the tunnel and the tunnel will be lighted with electricity.

The finished sewer on this contract is to be 48 inches in diameter and for all but 100 feet the grade is one in 1000.



Legend -

— completed trunk line
— trunk line under contract
- - - proposed trunk line
D trunk outlet

PLAN



PROFILE

City of Fitchburg
Sewage Disposal Commission

MAIN INTERCEPTING SEWER-SECTIONS 1,2A,3,4

PLAN AND PROFILE



TYPICAL SECTION



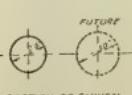
SECTION IN RIVER BED



LAWRENCE BROWN
TYPICAL SECTION



SECTION IN TUNNEL



SECTION OF SIPHON
CAST IRON PIPE

1911.

The standard section in open trench is six inches of concrete at both invert and crown and 10½ inches at springing line of the arch. In the tunnel the minimum allowable thickness of concrete is six inches.

All concrete for this section of sewer is mixed one part cement, two and one-half parts sand and four and one-half parts broken stone or screened sand. The brand of cement used is Giant. The mixing of concrete is being done by hand. Blaw steel forms are being used.

The contract for this section was awarded August 25 and the first excavation was made September 21. To January 1 about 600 feet of sewer in trench had been completed. The tunnel shaft at Fourth street had been excavated to grade and headings started from this shaft, and the shaft near Second street had been excavated to a depth of about 15 feet. The contract calls for completion by July 15, 1912.

SECTION 1. INTERCEPTING SEWER.—This section will extend from Station 2+30 on the high land at the disposal area to Station 62+30 at the southerly terminus of Section 2A, a distance of 6000 feet. About 900 feet of this will be a 48 inch concrete sewer on a grade of 1 in 1000, and the balance will be a 30 inch cast iron pipe siphon. The pressure at the lowest point on the siphon will be about 23 pounds per square inch. The completed siphon line will consist of a 30 inch and a 36 inch line in order to equal the capacity of the 48 inch sewer but only the 30 inch line will be laid at present. At the junction of the 48 inch sewer and the siphon line will be constructed a siphon chamber with an overflow to the mill pond of the Duck Mill Company. This overflow will only come into use when the flow is in excess of the capacity of the 30 inch siphon and for a number of years this will only be at times of heavy rain or rapidly melting snow. The cast iron pipe for this section will probably be delivered during the winter so that an early beginning of this work can be made. Plans for this section are about completed so that it will be possible to award the contract for construction early next season.

SECTION 4. INTERCEPTING SEWER.—This section will be from Putnam street westerly. Some studies have been made

relative to the Broad street location for this section but as it was felt that it was useless to spend a great amount of time on this until the Broad street matter was definitely settled nothing final has been done.

LATERAL CONNECTIONS.—The probable awarding of the contract for Section 1 before next May will assure the completion of the main sewer from Putnam street to the disposal area in 1912. The completion of this length of the sewer will make possible the connection of the existing sewer outlets with the main sewer for this distance and the removal from the river of about 50% of the sewage.

At this writing it is uncertain as to the time when construction at the disposal works will be ready for treatment of sewage, and if it shall be found impossible to be ready to care for sewage at the end of the season of 1912, it may be decided to delay making any lateral connections until early in 1913.

WEIR TO ASCERTAIN LEAKAGE.—During the construction of Section 3 large quantities of ground water were encountered and owing to the location of the sewer being below water level in the river bed and near the river for nearly the whole length of this section it would be natural to expect considerable leakage. In our computations to determine the total sewage flow to be cared for an allowance was made of about 74,000 gallons per day per mile of sewers assuming the territory to be well sewered. As this section covered a distance of over one-half mile of sewer and as nothing but leakage would probably run in this sewer for a year it was thought best to install a weir and obtain a continuous record for a number of months of this leakage. Accordingly a triangular weir as shown in one of the cuts was installed at Station 93+00. Observations of the flow over this weir thus far taken indicate that the leakage is less than the allowance made.

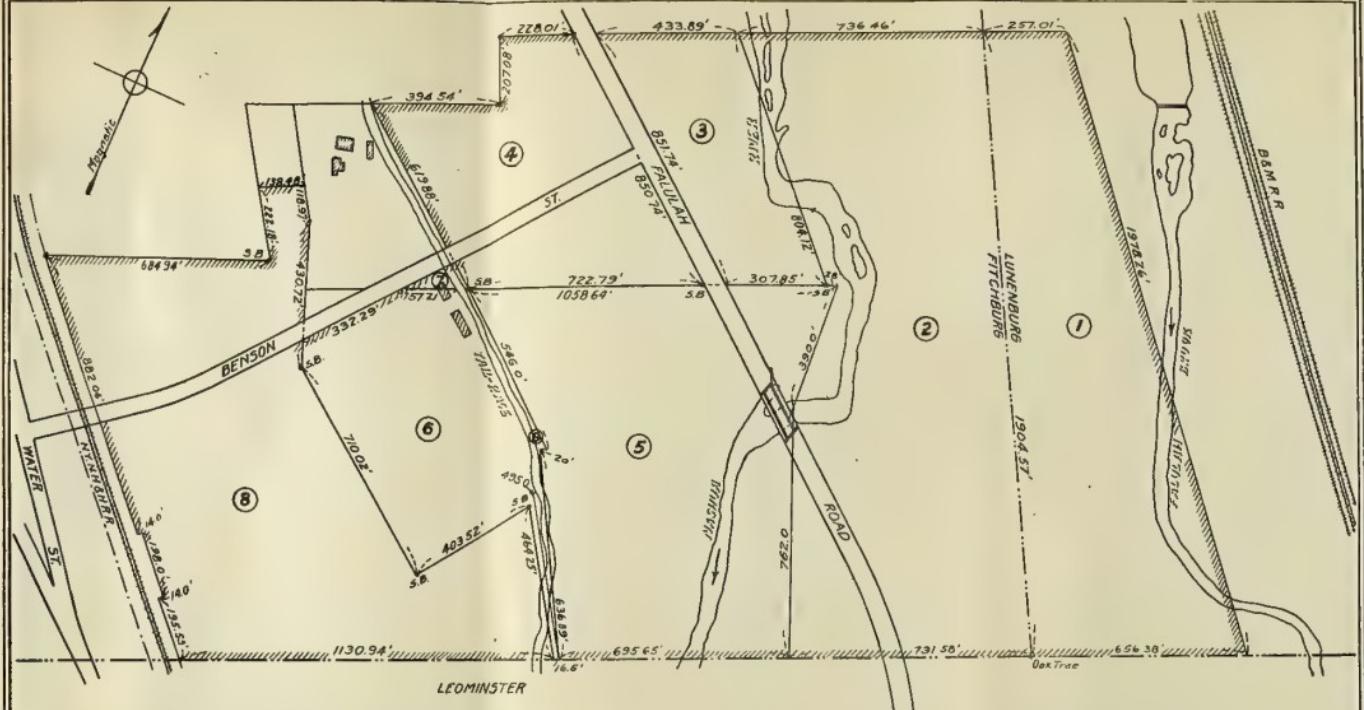


TABLE		
Parcel	Acres	Former Owner
1	19.9	Fitchburg R.R.C.O.
2	27.1	Fitchburg R.R.C.O.
3	6.5	Arthur H. Love
4	9.9	Rowana N.J. Goodridge
5	20.2	Orin M. Love
6	0.9	Porter W. Love
7	.11	Consolidated Rendering Co.
8	23.3	Ellen D. Benson Estate
9	.76	Unknown Owner
Total	116.67	

CITY OF FITCHBURG
SEWAGE DISPOSAL COMMISSION
PLAN OF LAND IN FITCHBURG AND LUNENBURG
TAKEN FOR FILTER BED LOCATION

SCALE-300 FEET TO THE INCH
JANUARY 1, 1912.

DISPOSAL AREA.

The accompanying plan shows the land taken for sewage disposal purposes and the location relative to the city line. This taking was filed in the registry of deeds June 26, 1911. The total area taken, not including highways, is 116.67 acres. Levels have been taken for this whole area and these levels have been plotted and the contour lines indicated for one foot elevations on the more level portions and five foot elevations on the steeper portions. On the land taken from the Fitchburg Railroad Company covering the easterly portion of the disposal area the trees and brush have been cut and burned preparatory to excavation and grading for construction of the disposal works. The wood cut on this work was sold for \$285.75. On the high portion of the easterly part of the disposal area a number of test pits were dug and samples of the material taken to a depth of more than twenty feet. Mechanical analyses of these samples have been made to determine their efficiency as a filtering material. No samples of the material on the Benson land at the westerly end of the area have been taken as it is planned to use the easterly end for the first construction.

This area seems to be suitable for the purpose for which it was taken having a large amount of available filtering material at each end and the central portion of about 50 acres being fairly level and adapted for the easy construction of sand filters. There are no residences near the area and the prevailing winds are away from any residences or manufactories. The area taken is all that will ever be available in Fitchburg or Lunenburg for this purpose but if any addition should be needed there is a large area in Leominster adjoining that already taken which is just as suitable for the purpose and is as free from nearby residences.

RAIN GAGE.

In designing storm water sewers one of the matters to which great weight is attached is the intensity of the rainfall in the city for which the sewers are to be built. Fitchburg is very fortunate in having two rainfall records for many years as kept by Dr. Jabez Fisher, beginning in 1865, and by Dr. A. P. Mason, beginning in 1883, both of which are continuous to the present

time. While these records give totals of different storms and monthly and yearly totals yet they do not give those intensities for short periods which are of so great aid in computations for sizes of storm sewers. In order to obtain information relative to the intensity of precipitation of local storms for a reasonable length of time a rain gage manufactured by Julian P. Friez of Baltimore, was installed in July. Thus far the maximum intensity recorded was a rate of 4.2 inches per hour for a period of five minutes and 2.5 inches per hour for a period of ten minutes. As the construction of storm water sewers and the separation of sewage and storm water will not probably be begun for two or three years it is hoped by that time to obtain some valuable data relative to rainfall intensities which will be of great assistance in that work.

DEPARTMENT YARD AND BUILDING.

In order to properly care for the existing sewer system and build such additions thereto as might be ordered by the Board of Aldermen, as well as to facilitate the larger work of the improved sewer system, it was essential that as early as possible provision should be made at some central location for a yard with suitable buildings. Such a location was needed for care of and storage of tools and supplies and general headquarters for all outside work. If possible a location with a railroad connection was most to be desired. The Walker lot on Water street seemed to be very desirable as being quite central so far as location is concerned and having a frontage on the railroad of nearly 600 feet. The lot also has a frontage on Water street of nearly 600 feet. This lot is triangular in shape and while a rectangular lot would in many ways be preferable, yet its other advantages more than offset the possible objection to the shape. The area of this lot, 48,981 square feet, is ample not only for all needed buildings but also for the out door storage of lumber, pipe and other supplies.

Upon the purchase of this lot studies were begun by the office force on plans for a department building and a number of possibilities were sketched. As soon as a decision was made detailed plans and specifications were drafted and proposals received. The contract was awarded to John R. Hosmer, the

JAN. 12, 1912.

TABLE 13 POPULATION AND RATE OF INCREASE OF ALL CITIES AND TOWNS IN MASSACHUSETTS HAVING A POPULATION OF 10,000 OR OVER IN 1910.

	BASED ON STATE AND U.S. CENSUS.			GAIN % 1895			GAIN % 1900			GAIN % 1905			GAIN % 1910		
	1875	GAIN % 1880	GAIN % 1885	1890	GAIN %	1890	GAIN %	1895	GAIN %	1900	GAIN %	1905	GAIN %	1910	
REVERE.....	1,603	41.1	2,263	60.7	3,637	56.0	5,668	30.9	7,423	40.0	10,395	21.8	12,659	43.9	18,219
LEOMINSTER.....	5,201	11.0	5,772	-8.2	5,297	37.3	7,269	26.7	9,211	34.5	12,392	15.4	14,297	23.0	17,580
ATTLBOROUGH.....	9,224	-20.4	11.1	18.6	13,175	-42.5	7,577	9.4	8,288	36.7	11,335	12.0	12,702	27.6	16,215
WESTFIELD.....	8,431	-10.1	7,587	18.1	9,961	9.4	9,805	8.7	10,663	15.5	12,310	10.6	13,611	17.9	16,044
PEABODY.....	8,066	11.9	9,028	5.6	9,530	6.6	10,158	3.4	10,507	9.7	11,523	3.7	13,098	20.0	15,721
MELROSE.....	3,990	14.3	4,560	33.8	6,101	39.6	8,519	40.5	11,965	8.3	12,962	0.3	14,295	9.9	15,715
HYDE PARK.....	6,316	12.2	7,088	18.2	8,376	21.7	10,193	16.0	11,826	12.0	13,244	9.6	14,510	6.9	15,507
WOBURN.....	9,568	14.2	10,931	7.5	11,750	14.9	13,499	5.0	14,178	0.5	14,254	1.0	14,402	6.3	15,308
GARDNER.....	3,323	-1.6	13,538	1.3	13,716	1.7	13,947	4.3	14,552	-0.5	14,478	1.4	14,675	1.9	14,949
MARLBOROUGH.....	6,730	33.8	4,988	46.0	7,283	15.7	8,424	9.0	9,182	17.8	10,813	11.1	12,012	22.0	14,659
CLINTON.....	8,424	20.2	10,127	6.1	10,941	26.2	13,805	8.5	14,977	-9.1	13,609	3.4	14,073	5.9	14,909
MILFORD.....	9,818	-5.2	9,310	0.4	9,343	-6.0	8,780	2.0	8,959	27.0	11,376	6.4	12,105	7.4	13,075
ADAMS.....	15,760	-64.6	5,591	48.1	8,283	11.2	9,213	-14.9	7,837	42.0	11,134	12.1	12,486	4.3	13,026
FRAMINGHAM.....	5,167	20.7	6,235	32.7	8,275	11.6	9,239	2.9	9,512	18.8	11,302	2.2	11,548	12.1	12,948
WEYMOUTH.....	9,819	7.7	10,570	1.6	10,740	1.2	10,866	3.9	11,291	0.3	11,324	2.3	11,585	11.3	12,895
WATERTOWN.....	5,099	6.4	5,426	14.9	6,238	13.4	7,073	10.1	7,788	24.6	9,706	16.0	11,228	14.3	12,875
SOUTHBRIDGE.....	5,740	12.6	6,464	0.6	6,500	17.8	7,655	7.8	8,250	21.5	10,025	9.7	11,000	14.5	12,592
PLYMOUTH.....	6,370	11.3	7,093	2.1	7,239	-1.0	7,314	8.8	7,957	20.5	9,592	15.9	11,119	9.2	12,141
WEBSTER.....	5,064	12.5	5,696	9.2	6,220	13.0	7,031	10.9	7,799	12.9	8,804	13.8	10,018	14.9	11,509
METHUEN.....	4,205	4.4	4,392	2.6	4,507	6.8	4,814	18.2	5,690	32.0	7,512	15.5	8,676	32.0	11,448
WAKEFIELD.....	5,349	3.7	5,547	9.2	6,060	15.2	6,982	18.9	8,304	11.9	9,290	10.5	10,268	11.1	11,404
ARLINGTON.....	3,906	5.0	4,100	14.0	4,673	20.4	5,629	15.7	6,515	32.0	8,603	12.4	9,668	15.7	11,187
GREENFIELD.....	3,440	10.2	3,903	24.8	4,869	7.9	5,252	18.6	6,229	27.2	7,927	5.5	9,156	13.9	10,427
WINTHROP.....	627	66.4	1,043	31.3	1,370	9.9	2,726	53.8	4,192	44.5	6,058	16.1	7,034	44.0	10,132

lowest of four bidders. Work was begun in October and carried forward rapidly so that on December 31 the building was nearly ready for the roof. It is expected that the building will be ready for use early in the spring. This building consists of a main structure 38 feet by 82 feet, two stories high and a one story ell, 27 feet by 41 feet, 6 inches. The building is located at the north end of the lot on the Water street frontage. The building is built of red brick with Rollstone granite underpinning and trimmings on a cement concrete foundation. There is a cellar for the heater and coal storage under the south end of the main building. The first floor contains a tool room, a store-keeper's room, men's room and lavatory. In the lavatory will be a shower bath which will be a great convenience at times for the men who are at work on certain phases of sewer maintenance. A number of lockers will be placed in the men's room. The second floor will contain a work shop, a laboratory and two small rooms for offices or other uses and a toilet. The ell will contain a blacksmith shop and a room for automobiles, auto trucks or other vehicles. The floors in the ell, the tool room and the cellar will be granolithic, in the work shop the floor will be matched spruce, two inches thick and in all the other rooms the finished floor will be of maple. The building will be heated by steam and lighted by electricity. Provision will also be made for both hot and cold water.

A side track for a portion of the length of the lot was installed at a cost of \$554.04 and it is planned to have this track extended about 200 feet the coming season. After the occupation of the new building and the removal of the old soap shop and shed, as well as the cottage house, which is now rented, some grading of the lot ought to be done and a small one story wooden building erected adjoining the car track for the storage of cement and other supplies needing protection.

SEWAGE DISPOSAL.

Much time and study have been devoted to the matter of sewage disposal with reference to Fitchburg to ascertain if some more economical method of disposal both as to construction and maintenance than intermittent sand filtration could be adopted. So far as the quality of the sewage effluent is considered there is probably no method that can excel sand filtration, but owing

to the large and continually increasing acreage required by increasing population it is possible that a satisfactory effluent can be obtained at a less cost and with much less area. During the past ten years rapid advance has been made in sewage disposal matters and considerable study should be devoted to the possibility of applying some of these methods to the Fitchburg disposal problem, if for nothing more than a first treatment so as to increase the rate of sand filtration. Such studies are now in progress but are not sufficiently complete to make a satisfactory report thereon at present.

MANUFACTURING WASTES.

In any manufacturing community there are large quantities of industrial wastes of varying composition, some of which are very difficult to care for in a disposal plant. The principal wastes in Fitchburg are from paper mills, wool scouring and dyeing of yarn and cloth. Whether such wastes should be admitted to the sewers or treated at each mill sufficiently to allow the effluent to flow into the river, is a matter requiring much consideration. Samples of these wastes have been taken and analyzed to aid in a just solution of this matter. Wool scouring wastes contain such large quantities of grease that something must be done to prevent this grease from stopping the working of the disposal plant as it surely will if taken into the sewers without any preliminary treatment. This statement is based on experiences at Clinton and Hudson. Paper mill wastes are necessarily so large and the location of the industry being at the upper portion of the river, the admission of such wastes to the sewer would in the summer months be a practical diversion of the river from its channel to the sewer.

Any definite recommendation relative to this matter must be delayed until some later report so that it can have the full and complete consideration that its importance merits.

Respectfully submitted,

DAVID A. HARTWELL,

Chief Engineer.

HARRISON P. EDDY,

Consulting Engineer.

WESTMINSTER

N

4

ASSUMED

LIMIT OF SEWERED AREA IN 1940

5

6

8

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

APPENDIX B.

REPORT OF CHIEF ENGINEER AND CONSULTING ENGINEER RELATIVE TO DIVERSION OF WATERS OF PUNCH BROOK

NOVEMBER 24, 1911.

To the Sewage Disposal Commissioners,

GENTLEMEN: — Upon the matter of the diversion of Punch Brook as petitioned for by the abutters below Academy street this report is respectfully presented for your consideration.

The need of some provisions for the flood waters of Punch Brook has been an active question for many years in this city and increasingly so as that part of the city has become more closely built up. Suggested methods of relief have been offered from time to time during the past 20 years but no attempt has been made at construction. The present channel at different locations on private land is altogether inadequate to carry the flow at times of heavy rain or rapid melting of large quantities of snow. The building of an adequate and improved channel along the present location of the brook has been considered as well as a diversion of a portion of the water through Academy and Rollstone streets to the river. This diversion has also been considered in the different studies for our improved sewer system and specifically recommended by both Mr. Coffin and Mr. Barnes.

From all available maps the drainage area of Punch Brook is about 450 acres. The drainage area of the brook at Academy street is about 370 acres. In making computations to ascertain the amount of water to be provided for in the design of storm water sewers certain conditions are considered in addition to the area, viz, the intensity of the rainfall, the character of the soil, the amount of pavements and roofs and the slope of the land. A number of formulas have been developed which are known

by the names of the men constructing them. The McMath formula is considered as one of the best and is $Q = ARc \sqrt{\frac{S}{A}}$

In this formula

Q = the cubic feet per second of run-off for which provision should be made at any point selected.

R = the rain-fall in inches per hour, which is nearly equal to cubic feet per second per acre.

C = constant dependent upon imperviousness of drainage area taking into consideration nature of soil, street surface and amount of area covered by roofs of buildings.

S = slope of drainage area in feet per thousand feet.

A = drainage area in acres.

In applying this formula to the Punch Brook drainage area of 450 acres with a constant of .5, a slope of 50 feet in one thousand feet and a rainfall of 2.75 inches per hour it would give a total flow to be provided for of about 400 cubic feet per second. For the area above Academy street of 370 acres the flow would be about 325 cubic feet per second. Possibly the constant of .5 may be too high for present conditions in this area as there is so much undeveloped land, and therefore the estimated quantity to be provided for may be too high, but as the unoccupied portion of this area is being rapidly covered with buildings, and as the future growth will result in a greater proportion of impervious roof and street surface, it seems wise in this construction to provide for the probable changed conditions of the future.

Above Academy street the flow of the brook is cared for in a granite culvert constructed partly in Elm street and partly in the Lowe playground and private land. The culvert in Elm street was built in 1902 when Elm street was constructed. This culvert is four feet by five feet in section on the flatter grades, averaging about two feet in 100 feet, and four feet square on the steeper grades, averaging about five feet in 100 feet. This culvert has been amply able to care for the flow of the brook for the past nine years, and there is no expectation that any other provision will need to be made for the waters of the brook north

of Academy street. This culvert extends from Academy street northerly about 1500 feet.

In studying this problem all possible methods of relief have been considered and the various projects are briefly outlined below:

1st. The improvement of the channel of Punch Brook in its present location. The length of the present brook channel between Academy street and where it crosses Elm street at the Police Station is 450 feet longer than the traveled way of Elm street between these same two points, and not only would the improvement of the present channel be more expensive than building a new channel between the same termini in the location of Elm street, but the improvement of the present channel would in no way relieve the owners of land of the detriment to property values by having the brook in its present location. There are some owners of land through which the brook flows, who have made ample provision for the brook so far as allowing sufficient cross-section of culvert, but the method of construction is so poor and so liable to call for repairs that it would not be of much value in a permanent treatment of this matter. On other private land the channel is large enough to take only a small portion of the maximum flow. Another objection to improving the present channel is that such a construction would be so near the surface that it would not allow for proper drainage of cellars in the whole area in proximity to the brook. From any point of view it does not seem advisable to improve the present channel of the brook.

2nd. The construction of a storm water drain in Elm street from Academy street to where it crosses Elm street near the Police Station. This drain would be of sufficient size to safely carry any probable flow from so much of the whole area as would drain into it. This construction would so care for the waters of the brook that the owners of land between Academy street and the Police Station would probably feel safe in filling the channel on their land, but it would still be necessary to maintain the present channel between Elm street and the river, and this channel is too small to provide for the run-off of the whole drainage area when more fully developed. In this project the drain would be 60 inches in diameter from Academy street to Grove street with the capacity of 320 cubic feet per

second, and from Grove street to the brook near the Police Station the drain would be 87 inches in diameter with a capacity of 387 cubic feet per second. The estimated cost of this construction would be \$31,723.

3rd. The construction of a storm water drain in Elm street as outlined in the second project with the addition that instead of connecting said drain with the present channel of the brook in Elm street, near the Police Station, a new drain would be constructed through Oliver street crossing Main street, through Putnam street and in the proposed location of Broad street to the Cushing Mill pond at or near the private bridge across the river. In this project the waters of the whole drainage area need to be provided for between Main street and the Cushing Mill pond and in addition it would be necessary to build the drain from the point in Putnam street, where it crosses the tail race from the Putnam Machine Co.'s wheel to the river, sufficiently large to also take the water from the water wheel. This project is the most radical treatment of the whole problem and is the most expensive. It would do away with any provision for any of the waters of the brook on any private land below Academy street. Possibly this project might appeal to some of the owners of land affected by the channel of this brook, yet if it were decided to undertake such a scheme of treatment it seems no more than just to the tax payers as a whole that some proportion of this cost should be paid for directly by the owners of the property along the channel of the brook, as such property would unquestionably be benefited far beyond any benefit which might accrue to the city as a whole. This project would require the same construction in Elm street between Academy street and Oliver street as project 2. In Oliver and Putnam streets from Elm street to the Putnam Machine Co.'s tail race the drain would be 90 inches in diameter and in Putnam street and Broad street to the Cushing pond the construction would be a box culvert six feet high and 10.6 feet wide. A serious objection to this project is the amount of space this box culvert would occupy in Putnam and Broad streets. This would take in Putnam street about 14 feet of a total width of 26 feet between curbs and it would be so near the surface of the streets that no pipes of any kind could be laid over it. In a street of the importance of Putnam street it does not seem

desirable to occupy so much of the available space for underground works by a channel for this brook. The estimated cost of this project is \$56,108.

The above three projects provide for the waters of this brook in a location substantially parallel with the location of the present channel. For nearly the whole distance the course of Punch Brook below Academy street runs parallel with the course of the Nashua river and it seems desirable to divert a portion of the flow of the brook from a point in Academy street directly to the river by the shortest feasible route and allow the remainder of the flow to be cared for in the present channel below Academy street, or to build a drain in Elm, Oliver, Putnam and Broad streets of sufficient size to care for the water on the drainage area tributary to the brook below Academy street. With this end in view the following three projects are considered.

4th. The construction of a drain in Academy street to Main street and in Main street to a point between the Wallace building and the Fitchburg Hotel, thence in land of the Parkhill Mfg. Co., passing Fire Station No. 3, to the river, this drain to be of sufficient size to carry an estimated maximum flow of the brook at Academy street of about 325 cubic feet per second. This is the location recommended by Mr. Coffin and Mr. Barnes. The estimated construction cost of this project is \$28,921 and in addition there would be the damage for easements on land of the Parkhill Mfg. Co. for a distance of about 500 feet. As this easement would be an incumbrance upon the property fronting Main street and would interfere somewhat with the possible extension of Mill B of said Company it is probable that the cost of the easement would add considerably to the total cost of this project. As a suitable location can be found wholly in public ways at a probable total cost less than this project, it does not seem desirable to recommend this location although it has much to commend it.

5th. The construction of a storm water drain in Academy, Main and Circle streets to the river. This is the shortest location which could be selected between the junction of Academy and Elm streets and the river, but as the elevation of the water in the Parkhill Mill pond at Circle street is only one foot lower than the bottom of the Punch Brook culvert in Academy street

the drain would need to be built of a much larger diameter than any of the other projects.

To care for the estimated maximum flow at Academy street would require in this project a sewer nine feet in diameter and the estimated cost is \$39,502.

6th. The construction of a storm water drain in Academy, Main and Rollstone streets to the river below the dam of the Parkhill Mfg. Co. This location is about 100 feet longer than the Circle street location but as the outlet would be below the dam of the Parkhill Mfg. Co., the construction would allow so much better grade as to reduce the size of the sewer to 69 inches if built to pass under the Parkhill Mfg. Co.'s power pipes in Rollstone street and 87 inches if built to pass over said pipes. The estimated cost of this project is \$31,422.

As projects 4, 5 and 6 only provide for so much of the drainage area as is tributary to the brook at or above Academy street, it would be necessary in order to grant the full relief petitioned for to provide further construction to care for the waters of that portion of the drainage area below Academy street, or about 80 acres.

Such provision could be made by construction of a drain in Elm, Oliver, Putnam and Broad streets, from Grove street to Cushing Mill pond, increasing the size from 42 inches to 69 inches. This would include not only the surface water of the lower part of the drainage area but also the water from the Putnam wheel. This construction would cost \$21,605. This amount should be added to the estimates given for projects 4, 5 and 6 in order to compare with projects 1, 2 and 3.

For comparison the above projects are briefly summarized as follows: —

PROJECT 1. Improvement of present channel is not deemed advisable or desirable.

PROJECT 2. New drain in Elm street from Academy street to a point 70 feet east of Oliver street, but no change in conditions between Elm street and the Cushing pond. Estimated cost \$21,723.

PROJECT 3. In addition to project 2 this provides a channel in Oliver, Putnam and Broad streets to care for water of

whole drainage area and Putnam wheel. Estimated cost Academy street to Cushing pond, \$56,108.

PROJECT 4. A drain in Academy and Main streets and land of Parkhill Mfg. Co. to river, and provision in Elm, Oliver, Putnam and Broad streets for lower portion of drainage area, at a total cost of \$50,526, with an additional cost for easement on private land.

PROJECT 5. A drain in Academy, Main and Circle streets to the river, and provisions in Elm, Oliver, Putnam and Broad streets for lower portion of drainage area at a total cost of \$61,107.

PROJECT 6. A drain in Academy, Main and Rollstone streets to the river, and provisions in Elm, Oliver, Putnam and Broad street for lower portion of drainage area at a total cost of \$53,207.

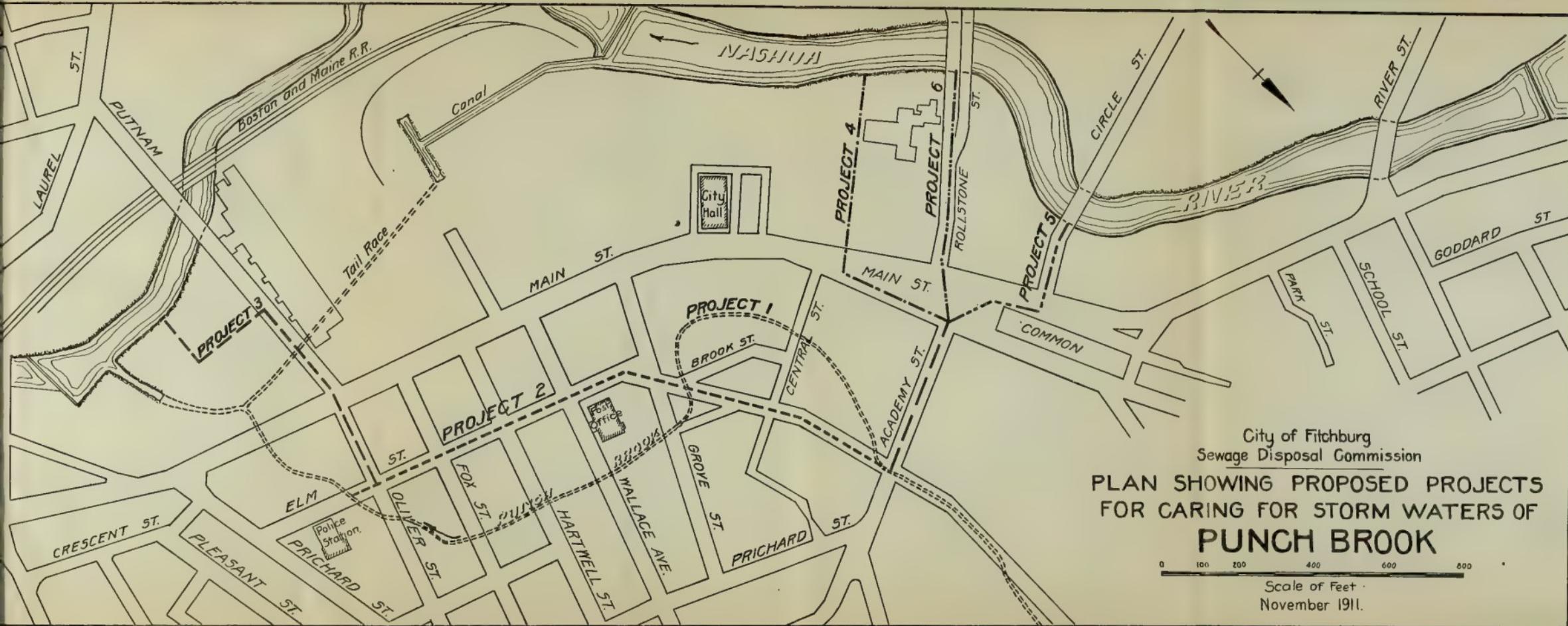
If any construction is attempted to provide for the waters of Punch Brook we would recommend that project six be adopted.

From both an engineering and financial point of view it seems to be the most satisfactory. Furthermore if the proposed provisions for the waters of Punch Brook were undertaken next year in conjunction with work to be done in Putnam street on the improved sewer system it would effect a considerable saving on the estimated cost of \$53,207.

Accompanying this report is a plan, showing the section of the city contiguous to the brook upon which are indicated the various projects outlined.

DAVID A. HARTWELL,
Chief Engineer.

HARRISON P. EDDY,
Consulting Engineer.



TWENTY-FIRST
ANNUAL REPORT
OF THE
TRUSTEES OF
BURBANK HOSPITAL
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG:
H. M. DOWNS PRINTING CO.
1911

BOARD OF TRUSTEES OF THE BURBANK HOSPITAL FOR THE YEAR 1912

His Honor, Mayor Frank O. Hardy, Chairman, *ex-officio.*

John W. Dooling, President of the Common Council.

Herbert G. Morse, City Treasurer.

For one year.

Henry A. Willis,
Albert H. Burgess,
Charles F. Baker,
Elliot N. Choate,
Henry McGrath.

For two years.

Benjamin D. Dwinnell,
Frederick H. Thompson,
Ernest P. Miller,
Charles H. Rice,
Frank O. Hardy.

For three years.

Alvah Crocker,
Herbert I. Wallace,
Charles E. Ware,
Charles T. Crocker,
Daniel Simonds.

WILBUR W. HENRY, Clerk of Board of Trustees and of
Executive Committee.

ALVAH CROCKER, Vice-Chairman.

WILBUR W. HENRY, Treasurer.

ELLIOT N. CHOATE and ALBERT H. BURGESS, Auditors.

EXECUTIVE COMMITTEE.

Mayor, Chairman, President Common Council, *ex-officiis.*

Charles T. Crocker, three years. Charles F. Baker, two years.
Albert H. Burgess, one year.

FINANCE COMMITTEE.

Mayor, Chairman, City Treasurer, *ex-officiis.*

Henry McGrath, three years. Frank O. Hardy, two years.
Herbert I. Wallace, one year.

HOSPITAL STAFF.

Surgeons.

Dr. W. F. Sawyer, Dr. A. P. Lowell,
Dr. F. H. Thompson, Jr.

Assistant Surgeons.

Dr. R. A. Rice, Dr. R. A. Morgner,
Dr. G. P. Norton.

Consulting Surgeons.

Dr. E. P. Miller, Dr. F. H. Thompson.

Physicians.

Dr. E. L. Fiske, Dr. E. J. Tully,
Dr. L. F. Baker.

Assistant Physicians.

Dr. F. M. McMurray, Dr. C. B. Gay,
Dr. B. W. Carey.

Consulting Physician.

Dr. C. H. Rice.

Consulting Orthopædic Surgeon.

Dr. W. R. MacAusland, Boston.

Visiting Oculists and Aurists.

Dr. A. F. Rodrick, Dr. J. A. Barton.

Bacteriologist, Electro-Therapeutist and Patholgist.

Dr. C. H. Jennings.

Non-Resident Consulting Surgeons.

Charles L. Scudder, Boston. Fred B. Lund, Boston.
John T. Bottomley, Boston.

Non-Resident Consulting Physicians.

Harry W. Goodall, Boston. Arthur K. Stone, Boston.
Charles H. Dunn, Boston.

STAFF ORGANIZATION.

President.

DR. E. L. FISKE.

Secretary.

DR. W. F. SAWYER.

Training School Committee.

Dr. E. L. Fiske, Dr. W. F. Sawyer.

OFFICERS OF THE HOSPITAL.

Superintendent and Resident Physician.

FREEMAN A. TOWER, M. D.

Superintendent of Nurses.

Miss Jessie A. Clarke.

Assistant Superintendent of Nurses and Operating Room Nurse.

Miss Helen Parks.

Housekeeper.

Mrs. Howard Emerson.

Internes.

Dr. L. M. Hagopian.

Dr. Morris Frank.

THE BURBANK HOSPITAL



REPORT OF TRUSTEES OF BURBANK HOSPITAL

FITCHBURG, MASS., January 31, 1912.

To His Honor, the Mayor, and the City Council of Fitchburg :

GENTLEMEN:—The Trustees of Burbank Hospital beg leave to, submit their twenty-first annual report in compliance with the provisions of Section 3 of Chapter 422 of the Acts of the Legislature of Massachusetts, passed in the year 1890.

A special meeting of the Board of Trustees was held January 26th, to act upon the request of the Board of Health, that they be allowed the use of the old hospital for contagious diseases during the diphtheria epidemic. The request was granted and the Superintendent proceeded to make the repairs necessary to put the old hospital in condition to be used during the winter months.

February 1st, the wards were opened for the reception of patients. Thirty-three were admitted, of which twenty-eight recovered and five died. The wards were closed May 18th. The Board of Health had charge of the wards, but the expenses of the same were paid from the current funds of the Hospital. \$1,193.02 were expended for repairs, nurses, necessary additions to equipments, etc., and the estimated cost of fuel, gas, provisions and groceries, etc., amounted to \$1,211.64, making a total estimated expense of the "Isolation Hospital" maintained for the Board of Health of \$2,404.66.

At the April meeting a committee was appointed to consider the advisability and feasibility of accepting tuberculosis patients in the Hospital, and if advisable consider arrangements necessary to be made and report. This committee at a special meeting in June reported favorably on the question of accepting such patients and presented plans for a Hospital to care for the same. The Trustees voted to present the report to the City Government at its next regular meeting and defer action on

adopting the report until the City Government had expressed its sentiment on the proposition. Later in the year at the October meeting an unfavorable report was presented by the City Government and no further action was taken by the Board of Trustees.

At the special meeting in June a recommendation by the Medical Board was presented, that physicians, members of the Medical and Surgical Staff and ex-members, and no others, be allowed to treat patients at the Hospital. The recommendation was not accepted by the Trustees.

At the October meeting a motion was passed that the rooms adjacent to the wards be reserved for the use of ward patients and be used for private patients only when they are not needed by ward patients, and then at the discretion of the Superintendent of the Hospital.

On recommendation of the Medical Board it was voted at the January meeting that all ward patients shall be treated by members of the Medical and Surgical Staff without compensation.

At the October meeting the rates of the private rooms were raised five dollars on each class, making the rates now \$20.00, \$25.00 and \$30.00 per week.

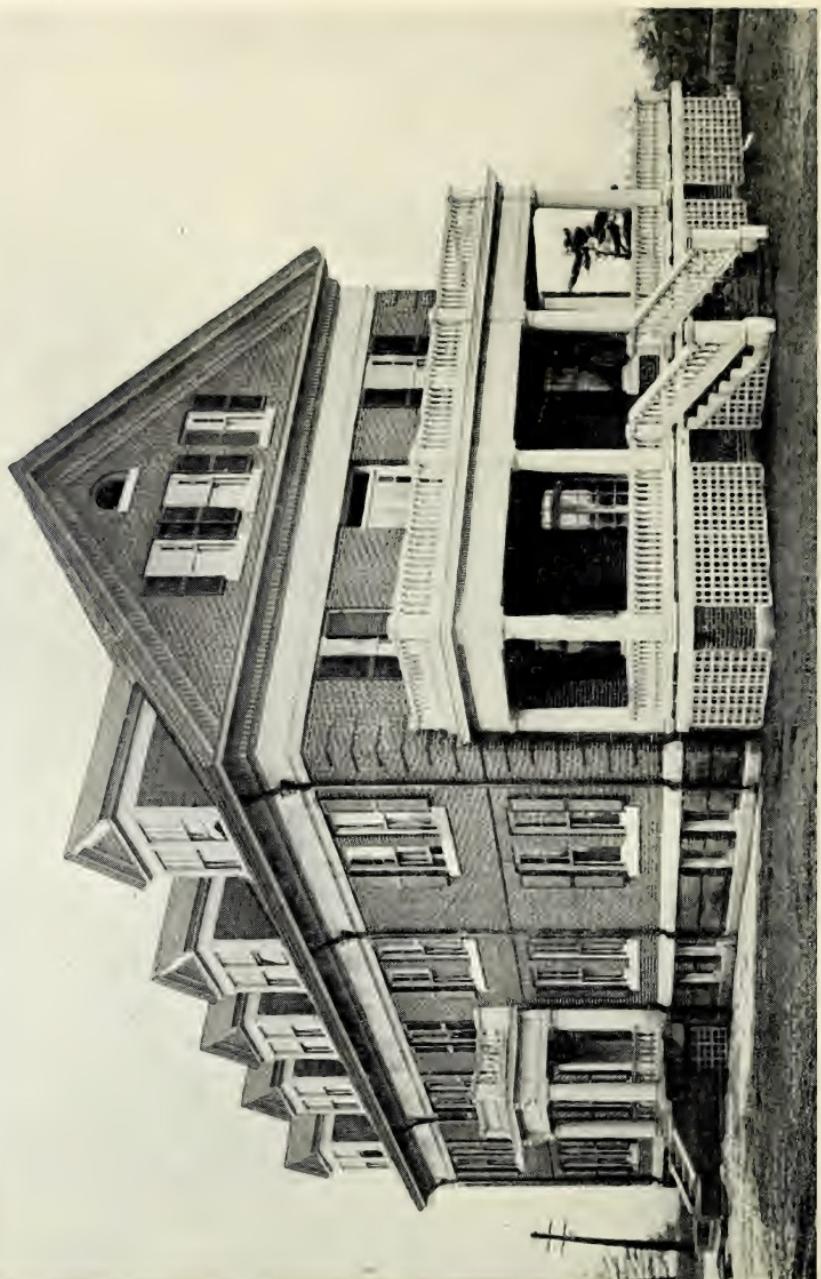
At the regular meeting in April an offer of \$300.00 was received for about $\frac{1}{2}$ acre of land on Whittemore street. The offer was accepted and the land was later deeded to the purchaser.

During the year a bequest was made to the Hospital of money to be used to furnish a room in memory of Francis Dascomb Wright, of Ashby, Mass., a former patient of the Hospital, Room No. 5 was assigned for the purpose, and was furnished ready for inspection at the January meeting, 1912.

Several changes in the personnel of the Board of Trustees have occurred in the past twelve months. Death removed two loyal and faithful members, C. T. Crocker who had served on the Board continuously from its organization, and Henry T. Page who had been a member for ten years.

Copy of the resolutions adopted expressing the appreciation of the services rendered to the Hospital and loss sustained by it in their death is printed elsewhere.

THE NURSES' HOME



C. T. Crocker was elected to fill the vacancy made by his father's death; Daniel Simonds was elected to fill the vacancy made by the death of Henry T. Page.

Frank O. Hardy and C. T. Crocker were elected to the Executive Committee.

Henry A. Willis who had served continuously as treasurer of the Hospital since its incorporation declined reelection. On motion of C. E. Ware seconded by Alvah Crocher, a rising vote of thanks was passed as an expression of the deep appreciation felt by the Board of Trustees for the long, faithful and efficient service rendered by M. Willis as treasurer of the Hospital, given often to the detriment of his private interests, but always willingly and to the great advantage of the Hospital.

Albert H. Burgess who had served as Clerk of the Board of Trustees for two years declined reelection. Wilbur W. Henry was elected Treasurer and Clerk.

At the annual meeting Elliot N. Choate and Albert H. Burgess were elected Auditors.

Henry McGrath was re-elected a member of the Finance Committee for three years.

At this meeting H. O. Cook, of the State Forestry Department, and W. H. Colton, City Forester, presented written recommendations for treating the large grove of mature hardwood in the rear of the Hospital and the young pine stand north-east of the Hospital. The matter was referred to the Executive Committee with full power.

During the year Dr. L. M. Hagopian and Dr. Morris Frank were elected Internes. At the annual meeting all the officers of the Hospital were reelected.

The resignation of Dr. F. H. Thompson as visiting surgeon was accepted with great regret and sincere appreciation of his long service with the Hospital. As appears in the list of members of the Staff, Dr. F. H. Thompson, Jr., was appointed to succeed his father as visiting Surgeon, Dr. G. P. Norton was added to the Staff as Assistant Surgeon, Drs. C. B. Gay and B. W. Carey were added as Assistant Physicians.

A service for eye and ear cases was established and Drs. J. A. Barton and A. F. Rodrick were elected visiting Oculists and Aurists to have charge of this service.

Dr. F. H. Thompson was elected Consulting Surgeon.

Boston consultants were added to the Staff, Drs. Charles L. Scudder, Fred B. Lund, and John T. Bottomley were elected Consulting Surgeons, Drs. Henry W. Goodale, Arthur K. Stone, and Charles H. Dunn were elected Consulting Physicians.

In July, 1901, Sarah W. Burbank placed in trust, funds sufficient to build a home for the nurses of Burbank hospital. In the fall of 1909 work was begun and in the summer of the following year (1910) the Home was so nearly completed that the nurses moved in.

The building has a capacity sufficient to accommodate thirty nurses besides the superintendent of nurses, with separate quarters for night nurses. Each nurse has a room to herself. There are spacious bath rooms on each floor, living room and reception rooms on the first floor, and the building is thoroughly and comfortably furnished. A full description in detail was published at the time in the daily papers, and the building was officially turned over to the Trustees on the sixteenth day of January nineteen hundred and eleven. The total cost of building and furnishings was a trifle under forty thousand dollars.

It is hardly necessary to dwell upon the benefits of this beautiful home. Its presence simply adds to the debt of gratitude which Fitchburg owes to the memory of that public-spirited citizen, Gardner S. Burbank, and his equally public-spirited wife.

Respectfully submitted,
WILBUR W. HENRY,
Clerk for the Trustees.

VISITING COMMITTEE OF TRUSTEES.

The executive committee elected the following:

John W. Dooling,	March 1 to May 1
Henry McGrath,	April 1 to June 1
Frank O. Hardy,	May 1 to July 1
Henry A. Willis,	June 1 to August 1
Charles E. Ware,	July 1 to September 1
Daniel Simonds,	August 1 to October 1
Charles T. Crocker,	September 1 to November 1
Alvah Crocker,	October 1 to December 1
Herbert I. Wallace,	November 1 to January 1
Elliot N. Choate,	December 1 to February 1
Benjamin D. Dwinnell,	January 1 to March 1

In Memoriam

On Thursday, January fifth, nineteen hundred and eleven Charles T. Crocker died. He was a trustee of this institution continuously from its inception. In 1890, when certain of the friends of the late Gardner S. Burbank petitioned the Legislature for the incorporation of the Burbank Hospital, Mr. Crocker's name appeared among the petitioners, and he became one of the fifteen incorporators.

To the councils of this corporation he gave more than a proportionate share of his time which was so filled with a multitude of duties. He was a constant and interested attendant at all meetings. Questions concerning the Hospital, whether of policy or of detail, received the same painstaking, careful thought that he was accustomed to bring to bear upon his own business undertakings. Throughout this institution's twenty years of life, both in routine matters and in the more involved considerations of recent years, Mr. Crocker's steady, calm and accurate judgment was of the utmost value. In his judgment of men he was ever fair minded and democratic, testing his fellows by the true standard of personal worth.

In this attempt to record upon a printed page our sense of loss, we realize that mere rhetoric is inadequate to express more than coldly our warm feelings of regard for Mr. Crocker. We appreciate that the loss is not solely ours, nor this institution's; that it is vastly more far-reaching—a loss to be shared by many—business associates, friends and relatives. Reverently and sincerely we join with these others in a common tribute to him who still can counsel and guide us by the strong example of a good life lived. This generation and subsequent generations must be influenced for good by the unusual strength and directness of Mr. Crocker's life. To the end that his name shall not be soon forgot, we spread this Memorial upon the records of this Corporation.

Henry T. Page died on the twenty-third day of September nineteen hundred and eleven. He was elected a Trustee of the Burbank Hospital January 16, 1899, to fill the vacancy caused by the death of Amasa Norcross, and remained on the Board until his death.

Throughout his term of service he gave to the Hospital the same faithful, conscientious attention which he bestowed upon every enterprise with which he was connected.

His interest was expressed by his regular attendance at the meetings of the Board, from which only serious illness ever kept him.

His advice, drawn from his thorough business training, was ever ready and always helpful.

His loyalty to the Hospital, to those in authority, and to those who spent their time in the routine duties of physician or nurse, was unfailing. His appreciation of the large place the Hospital filled for the good of the general public was well known and marked.

His term of service as a Visiting Trustee was no empty title for it found him performing the duties called for by the By-Laws.

His strictures, which were few, were received with the deference they deserved, and his praise was valued the more because it was the result of the personal inspection of a man familiar with all the seeming petty details which go to make up good management.

His cordial, loyal friendship for his associates on the Board will long be remembered and missed.

TREASURER'S REPORT

To the Trustees of the Burbank Hospital:

The twenty-first annual report of the Treasurer for the year ending December 1, 1911, is herewith respectfully submitted:

H. A. Willis in account with Burbank Hospital:

RECEIPTS.

For General Accounts:

From lumbering, lumber and wood sold,	\$1,746 35
From sale of real estate,	300 00
From sale of American Tel. & Tel. Co. rights,	270 00
From sale of Boston & Maine rail- road rights,	134 90
	—————
	\$2,451 25

For Income Accounts:

City of Fitchburg, appropriation,	\$16,000 00
Income from investments,	13,689 59
Board and care of paying patients,	10,066 95

Free beds:

Boston & Maine Railroad,	\$300 00
G. W. Wheelwright Paper Company,	250 00
Fitchburg & Leominster St. Ry. Co.,	250 00
H. I. & G. R. Wallace,	250 00
Crocker, Burbank & Co.,	250 00
	—————
	\$1,300 00

Sale of books, supplies, use of opera- ting room, ambulance, telephone, radiographs, postage, etc.,	\$1,052 65
---	------------

Sale of farm products,	\$585 67
Rents,	61 00
	—————
Cash balance, December 1, 1910,	7,495 56
Total	—————
	\$52,702 67

PAYMENTS.

For General Accounts:

American Tel. & Tel. Co., stock, 40 shares at \$151,	\$6,040 00
New hospital buildings, (Wiley & Foss, extension of chimney),	524 79
Lumbering, (C. H. Greene, teaming),	131 06
	—————
	\$6,695 85

For Expense Accounts:

Hospital expense account,	\$41,069 50
General expense account,	894 54
	—————
	\$41,964 04
	—————
Cash balance, December 1, 1911,	\$4,042 78
	—————

Accounted for as follows:

Sales of real estate, balance,	\$2,189 23
Lumbering, net proceeds,	767 63
Burbank fund,	441 79
Sorosis fund,	10 50
Balance, running expenses,	633 63
	—————
	\$4,042 78

PAYMENTS IN DETAIL.

GENERAL EXPENSE ACCOUNT.

W. E. Putney, insurance,	\$287 68
Wilbur W. Henry, services,	200 00
Massachusetts Collecting & Rating Agency, commissions,	156 75

Charles F. Wilson, insurance,	\$51 11
H. A. Hatch & Son, Treasurer's bond,	62 50
A. H. Burgess, services and postage,	54 43
Fitchburg Mutual Fire Insurance Co.,	
insurance,	22 36
S. LeRoy Longley, insurance,	18 66
K. Pardon Rawson, insurance,	17 55
H. M. Downs Printing Co., annual reports,	10 00
H. M. Downs Printing Co., cut Nurses'	
Home,	5 00
Estabrook & Co., commissions,	7 00
Frank E. Fairbanks, picture Nurses'	
Home,	1 50
	—————
	\$894 54

HOSPITAL EXPENSE ACCOUNT.

Ambulance:

Wages of driver,	\$354 13
Grain, shoeing, supplies and repairs	
equipment,	459 58
Books, stationery and printing (Text	
books \$189.30)	395 15
Clothing, uniforms, etc.,	33 75
Crockery, tinware, etc.,	296 71
Carriages and traveling expenses,	7 50
Dry goods, bedding, etc.,	1,792 56
Fuel, 651.4 tons coal, 35 cords wood,	3,417 58
Floor polish and cleaner,	52 12
Furniture and repairs,	644 72

Farm :

Labor,	2,186 23
Supplies and repairs,	2,751 84
Veterinary,	27 00
Groceries and provisions,	6,467 29
Hardware, paint, brushes, etc.,	164 63
Ice,	23 95

Lighting :

Electric,	\$11 23
Gas, hospital,	449 18
Gas, Superintendent's house, and " Isolation hospital,"	111 62
Gas, Nurses' Home,	55 20
Gas, barn,	3 00
Lamps and shades, etc.,	143 72
Laundry supplies and repairs,	188 79
Medical and surgical supplies,	2,512 05
Newspapers,	9 00
Postage, box-rent, etc.,	23 00
Power and machine supplies,	356 71

Repairs of buildings and fixtures : —

Wages, pay roll,	1,553 35
Materials, and other labor,	1,573 98
Telephone,	190 38

Training School :

Clothing, etc.,	67 55
Instruction,	123 40
Wages,	1,574 79
Trucking, freight and express,	99 31

Wages :

Superintendent,	2,000 00
Pathologist,	300 00
Housekeeper,	495 00
Nurses,	3,286 71
Domestics,	4,636 79
Engineer and assistant,	1,335 50
Orderly and assistant,	742 74
Miscellaneous labor,	105 00

Miscellaneous items :

Dr. Robert A. Rice, "Isolation hospital,"	10 00
Dr. Hector Jacques, "Isolation hospital,"	32 00
Sundries,	4 76
	—————
	\$41,069 50

"Isolation Hospital" cost \$1,193.02 in cash, and estimated expenses of \$1,211.64 for supplies; total \$2,404.66.

INCOME AND EXPENSES.

Total of income accounts (see receipts)	\$42,755 86
Total of expense accounts, (see payments)	41,964 04
Balance for year,	\$791 82
Balance, December 1, 1910,	2,881 65
Balance, December 1, 1911,	\$3,673 47

LEDGER BALANCES.

CREDIT ACCOUNTS.

Gardner S. Burbank Fund,	\$520,427 79
Sarah W. Burkank, donations,	50,568 06
Real estate sales,	9,800 00
Lumbering, unappropriated net proceeds,	767 63
Sorosis fund,	10 50
Balance account,	3,673 47
	\$585,247 45

DEBIT ACCOUNTS.

Real Estate,	\$70,000 00
Old Hospital, building and furnishings, (1894-1901)	19,626 25
Old Hospital, repairs and furnishings, (1909-1910)	1,299 89
New Hospital, buildings, (1900-1910)	106,984 34
New Hospital, buildings, (1911)	524 79
New Hospital, furnish'gs (1900-1904)	8,888 34
Nurses' Home,	40,125 06
Bank stocks,	28,310 00
Railroad and street railway stocks,	286,436 00
Telephone and railroad bonds,	13,240 00
Telephone stock,	5,770 00
Cash,	4,042 78
	\$585,247 45

GARDNER S. BURBANK FUND.

Balance, December 1, 1910,	\$520,292 89
Boston & Maine Railroad rights, sold,	134 90
Balance, December 1, 1911,	\$520,427 79

SARAH W. BURBANK DONATIONS.

Donations, 1900,	\$10,800 00
Nurses' Home, erected and furnished by Charles E. Ware, as provided for in letter of Sarah W. Burbank, July 14, 1900, and delivered to Trustees, January 16, 1911:	
Cost of building,	\$32,660 92
Cost of furnishings,	7,107 14
	\$39,768 06
	\$50,568 06

REAL ESTATE SALES ACCOUNT.

Total sales of real estate,	\$9,800 00
Addition to new Hospital buildings, 1910,	\$1,483 77
Nurses' Home, grading, etc., 1910,	357 00
American Tel. & Tel. Co., stock, 1911,	5,770 00
	\$7,610 77
Balance, cash,	\$2,189 23

Accounts due December 1, 1911, from agreed paying patients:

Of doubtful value,	\$3,449 58
Probably collectable,	3,301 65
Farm products used at Hospital, valued at	4,252 08
Farm labor, on Hospital account,	295 25

Farm products on hand :

12 barrels apples.	333 bushels potatoes.
8 bushels beets.	400 heads cabbage.
12½ bushels carrots.	15 tons hay.
3 bushels parsnips.	45 tons ensilage.
105 bushels turnips.	2 tons oats for fodder.
8 bushels onions.	

Number of patients admitted during the year :

Free, 282 representing 839 weeks treatment.

Paying, 551

833 representing 2,475 weeks treatment.

Highest number at any one time,	69
Lowest number at any one time,	29
Average daily number,	47.6
In Hospital November 30, 1911,	40
Average cost per patient, per week,	\$15.65
Out-patient treatments given in addition to the work summarized above,	443
“Isolation Hospital,” (not included in above summary).	
Patients admitted,	33
Highest number at any one time,	12
Lowest number at any one time,	1
Total estimated cost of “Isolation hospital,”	\$2,404 66
Average cost per patient, per week,	29 12

Respectfully submitted,

HENRY A. WILLIS,

Treasurer.

REPORT OF AUDITORS

BURBANK HOSPITAL.

We hereby certify that we have examined the accounts of the Treasurer for the year ending December 1, 1911, and find the same correct with vouchers for all payments.

The balance of cash, \$4,042.78, is all on deposit in bank.

Certificates of 216 shares of Bank stocks, valued at	\$28,310 00
1816 shares of Railroad and Street Railway stocks, valued at	286,436 00
40 shares of American Tel. & Tel. Co. stock, valued at	5,770 00
\$14,000 Telephone and Railroad bonds, valued at	13,240 00
Making a total of	\$333,756 00
All on deposit in safe deposit vaults.	

Respectfully submitted,

E. N. CHOATE,

CHARLES T. CROCKER,

Auditors.

FITCHBURG, MASS., January 13, 1912.

REPORT OF THE SUPERINTENDENT

To the Trustees:

The following report for the year 1911 is respectfully submitted:

Eight hundred and thirty-five patients entered the Hospital for treatment. The daily average number of patients has been 47.6, exclusive of diphtheria patients. There has been no particular increase in any variety of cases. The general routine of hospital work has gone on uninterrupted save for the reception of diphtheria patients early in the year.

February 1st the wards of the Old Hospital were opened for the reception of patients suffering from diphtheria at the request of the local Board of Health, on account of the severity of the epidemic in the city. Thirty-three patients were admitted, of whom twenty-eight recovered and five died. The wards were closed May 18th.

A diphtheria epidemic involving five nurses and six patients made its appearance in the Hospital early in June. Investigation showed it to have originated from the little child who was transferred from the Isolation Hospital at the time it was closed to the main Hospital for the purpose of having tracheotomy performed. At the time of her transfer several cultures were taken from her throat and all were negative so it was supposed safe to transfer her to the Hospital. Five weeks after she entered, one nurse became infected and then two others, all in the same ward with the child. Then she was suspected as the infecting agent. Examination of her throat proved the truth of the conclusion as the discharge from the tracheotomy tube was loaded with diphtheria bacilli. All the infected nurses and patients were transferred to the Isolation Hospital and cared for there. Fortunately all the cases made a good recovery. At this time the Isolation Hospital was open thirty-six days and the extra cost to the Hospital was \$442.62.

Four additional beds for private patients were made available early in the year making a total of fifteen. Even with these accommodations the Hospital has been unable to supply the demand for this class of service several times during the year. The daily average number of patients for the year 47.6, which is within eight of our capacity, shows that if additional provision for the care of patients is not provided the Hospital will be unable to meet the needs of the community.

Because of the additional work a second interne was appointed in April and two have continued on duty since that time. Dr. L. G. Hagopian was appointed April first, Dr. L. M. Oulton was appointed August first and resigned October first, Dr. Morris Frank was appointed to fill out the remainder of the year till August first, 1912.

Several changes in the personnel of the officers have occurred: Miss Griffin after a faithful service of five years severed her connection with the Hospital September first; Miss Boles, operating room nurse for two years, left July first; Miss Chisholm, night supervisor for one year, left July fifteenth; Miss Cann, assistant superintendent of nurses for nine months, left September first. Miss Jessie A. Clarke, a graduate of the Massachusetts General Hospital Training School for Nurses, came September first to act as superintendent of nurses; Miss Helen Parks, a graduate of the same school, came October first to act as assistant superintendent of nurses and operating room nurse.

The money expended for repairs during the year has been used as follows: Furniture for the wards has been amplified and repaired. Several floors in different parts of the Hospital which were deteriorating rapidly have been treated to preserve their life. All the stairs in the Hospital have been refinished. The linen closets for the various wards have been altered to increase the convenience and facilities for storage. The large ice box has been altered and a new ice box has been built in the basement for the storage of ice for ward and other uses except cold storage. The laundry has been amplified by the addition of the room on the opposite side of the corridor, to be used for hand ironing. This room was formerly used as a storeroom and taking it for the laundry necessitated fitting up another room for storage purposes. Nearly the whole of the exterior

wood work of the Hospital has been painted. A storeroom for preserves has been made in the basement. A temporary central diet kitchen for preparing special diets has been constructed. The engine running the dynamo has been thoroughly over-hauled. The sterilizers in the surgery have been thoroughly repaired.

The floor and roof of the ambulance barn have been repaired. The roof of the farm cottage has been partly reshingled and the remainder repaired. The rooms inside have been repapered and painted. The roof of the farm barn has been repaired and some changes in the interior have been made.

The income from the farm including products used at the Hospital and those sold outside comes within \$100.00 of equaling the expenses. This is gratifying considering the season. The drought seriously affected all products of the soil throughout New England and other parts of the country. Here the yields were diminished by at least one-third; so it is safe to say that had the season been normal the farm would have shown a balance on the right side. The dairy herd has made the best showing of any department of the farm and has made a profit. September first Fred Alden succeeded Olaf Nelson as farm foreman.

All of the lumber cut off in 1910 has been disposed of. The cordwood has been sold to be delivered but it is not all delivered yet. There is owing for lumber now \$518.59. The cordwood remaining is worth \$221.25. The net returns from the first operation are \$1607.47

It is gratifying that the interest in the Hospital manifest by donations is becoming more wide-spread throughout the city. Two private rooms have been furnished completely. Materials and sewing have been furnished by two organizations. A large contribution of books including recent fiction, was donated to nurses and patients. Several articles to replace these worn out in rooms already furnished by clubs and individuals have been received. A large list of clothing and general supplies has been received. A great many people have contributed magazines and flowers.

Respectfully submitted,

FREEMAN A. TOWER, *Supt.*

SCHOOLS FOR NURSES

The Training School for Nurses began the year with eleven pupils and seven probationers. During the year five pupils have graduated, one left the school on account of illness and has been given an indefinite leave of absence. Twenty-three applications to the Training School have been received; sixteen probationers have been received and five of these have been accepted as pupils in full standing in the school. November 30, 1911, there were eighteen pupils and two probationers in the school.

Early in the year the nurses in training were unable to perform all the work required and graduates were employed to assist on the wards. In July, four graduates were received for a six months post-graduate course and since they came the services of graduates have been dispensed with. The work in the Hospital was so well handled in November that three pupils were sent to cases outside the Hospital, that they might gain experience in nursing as they will find it in practice.

The course of lectures and class work for the Training School was amplified in 1910 and further amplified this year. All the members of the medical and surgical staffs with the exception of the consultants have given lectures. Seventy were given during the year. One hundred and sixty-six classes have been conducted by the Superintendent of Nurses and assistant. Lessons in cooking and massage were conducted by women not connected with the school.

The new Nurses' Home, occupied September, 1910, has added greatly to the comfort and happiness of the nurses. They are constantly reminded of the generosity of the donor, and the careful oversight of the committee of the trustees, who had charge of the erection of the building. Nothing is lacking, not even the slightest detail, to make it a perfect home.

PROBATIONERS' COURSE.

DEMONSTRATIONS.

- I. Care of kitchen, refrigerators.
 - Water coolers.
 - Dishes.
 - Food.
 - Serving of trays; waste.
- II. Sweeping and dusting.
- III. Beds and bed making.
 - Care of linen—removing stains.
 - Disinfection of beds, linen, etc.
- IV. Care of bed patients.
 - Bathing and care of skin, mouth, teeth, heads, hand and feet.
- V. Filling and applications of ice caps and hot-water bottles.
- VI. Application of abdominal swathes.
 - Preparation of patients for operation.
- VII. Reception and care of new patients.
 - Observing and reporting symptoms.
 - Care of clothing.
 - Charting, temperature, pulse, respiration.
- VIII. Medication.
- IX. Enemata—uses and methods.
 - Catheterization, douches.
- X. Care of bodies.
- XI. Care of ether patients.
- XII. Application of fomentations, poultices, compresses, etc.

PROBATION CLASS WORK.

- I. Ethics. Relation of pupil, to Hospital.
 - to Training School.
 - to Patients.
- Care of Hospital property.
- Care of patients' property.
- Ward supplies.
- Hygiene—Ward.
 - Personal.
- Urine.

Elementary Bacteriology.

Class work taken from Maxwell and Pope.

Practical Nursing.

SENIOR LECTURES.

Materia Medica, Dr. Baker, Sept. 15, 22, 28, Oct. 6, 13, and 20.

Obstetrics, Dr. Fiske, Oct. 27, Nov. 3, 10, 17, 24, and Dec. 1.

Pediatrics, Dr. Rice, Dec. 8, 15, 22 and 29.

Contagious Diseases, Dr. Tully, Jan. 5, 12, 19 and 26.

Infectious Surgical Diseases, Dr. Rice, Feb. 2.

Abdominal Surgery, Dr. Thompson, Feb. 9.

Gynecological Surgery, Dr. Thompson, Sr., Feb. 16.

Diseases of the Nervous System, Dr. Tower, Feb. 23, March 1 and 8.

Uries, Dr. Jennings, March 15.

Tuberculosis, Dr. McMurray, March 22.

Pleurisy, Dr. McMurray, March 29.

Diseases of the Skin, Dr. Morgner, April 5 and 12.

Diseases of the Blood, Dr. Morgner, April 19.

Hygiene and Sanitation, Dr. Thompson, Jr., April 26, May 3 and 10.

Ten lessons in massage were given by Miss Hutt of Boston.

JUNIOR LECTURES.

Ethics of Nursing, Dr. Tower, Sept. 8.

Bacteriology, Dr. Jennings, Sept. 12, 19, 26 and Oct. 3.

Sterilization, Dr. Thompson, Sr., Oct. 10.

Surgical Nursing, Dr. Thompson, Sr., Oct. 17.

Surgical Emergencies, Dr. Lowell, Oct. 24, 31, Nov. 7, 14, 21 and 28.

Bandaging, Dr. Morgner, Dec. 5, 12, 19, and Jan. 2.

Medical Emergencies, Dr. McMurray, Jan. 9.

Anesthetics, Dr. McMurray, Jan. 16.

Twelve lessons in Anatomy and Physiology, Dr. Thompson, Jr.

Six lessons in Applied Anatomy, Dr. Sawyer.

Ten lessons in Dietetics and Invalid Cooking were given by Mrs. Jarvis of Miss Farmer's School of Cooking, Boston.

Approved text books in the various subjects are used in all courses, Probationary, Junior and Senior, and the Superintendent of Nurses and her assistants have conducted recitations in each subject based on the lectures by the staff, and material in the text books.

REPORT OF MEDICAL STAFF

MEDICAL CASES

DISEASES	ADMITTED			DISCHARGED			In Hospital Dec. 1, 1910	In Hospital Dec. 1, 1911
	Males	Females	Totals	Well	Improved	Unimproved		
Alcoholism.....	3	1	4	2	2	0	1	1
Anæmia Pernicious.....	1	1	2	1	1	0	1	1
Arterio-Sclerosis.....	1	1	2	1	1	0	1	1
Arthritis Atrophic.....	1	1	2	1	1	0	1	1
Arthritis Gonorrhœal.....	1	1	2	1	1	0	1	1
Asthma.....	1	1	2	1	1	0	1	1
Bronchitis, Acute.....	2	1	3	2	2	0	2	2
Broncho-Pneumonia.....	2	1	3	1	1	0	2	2
Carcinoma, Liver.....	2	1	3	1	1	0	1	1
Carcinoma, Metastases.....	1	1	2	1	1	0	1	1
Cerebral Hemorrhage.....	3	1	7	4	4	0	3	3
Cirrhosis, Liver.....	1	1	2	1	1	0	1	1
Chorea.....	1	1	2	1	1	0	1	1
Constipation.....	2	1	3	3	1	0	3	3
Dermatitis.....	1	1	2	1	1	0	1	1
Diabetes.....	2	2	4	2	2	0	1	1
Eclampsia.....	1	1	2	1	1	0	1	1
Eczema.....	4	2	6	1	5	0	6	6
Endocarditis.....	1	1	2	1	1	0	1	1
Erysipelas.....	1	1	2	1	1	0	1	1
Gastritis, Acute.....	1	1	2	1	1	0	1	1
Gastritis, Chronic.....	1	1	2	1	1	0	1	1
Gastro-enteritis.....	1	1	2	1	1	0	1	1
Gastric Ulcer.....	1	1	2	1	1	0	1	1
Goitre exophthalmic.....	1	1	2	1	1	0	1	1
Heart Disease, valvular.....	4	9	13	1	4	1	4	10
Hemiplegia.....	1	2	3	1	3	0	1	3
Ileocolitis.....	1	1	2	1	1	0	1	1
Indigestion.....	2	2	4	2	2	0	2	2
Indigestion, Intestinal.....	3	3	6	3	3	0	3	3
Insolation.....	2	2	4	1	1	0	1	1
Insanity.....	1	1	2	1	1	0	1	1
Insanity, Alcoholic.....	1	1	2	1	1	0	1	1
Malnutrition.....	4	1	5	2	2	0	2	4
Marasmus.....	1	1	2	1	1	0	1	1
Meningitis.....	3	1	4	1	1	0	3	4
Morphinism.....	1	1	2	1	1	0	1	1
Nephritis, Acute.....	1	1	2	1	1	0	1	1
Nephritis, Chronic.....	3	3	6	1	1	0	2	3
Neurasthenia.....	1	1	2	1	2	0	1	1
Neuritis.....	1	1	2	1	1	0	1	1
No Disease.....	1	1	2	1	1	0	1	1
Ophthalmia Neomatorum.....	1	1	2	1	1	0	1	1
Pericarditis.....	1	1	2	1	1	0	1	1
Placenta, praevia.....	2	2	4	2	2	0	2	2
Pleurisy.....	1	1	2	1	1	0	1	1
Pneumonia, Lobar.....	25	5	30	24	1	1	4	30

MEDICAL CASES (*Continued*)

DISEASES	ADMITTED			DISCHARGED			In Hospital Dec. 1, 1910	In Hospital Dec. 1, 1911
	In Hospital		Totals	Well		Improved	Unimproved	
	Males	Females						
Poisoning Head.....			1				1	
Rheumatism, Acute.....	4	1	5	5	5	2		5
Rheumatism, Chronic.....	1	1	2	3	3	2		3
Rheumatism, Articular.....	2	1	3					2
Syphilis.....	1		1					
Tonsilitis.....			2	2	2			
Tuberculosis, Pult.....	1	3	1	5	4	2		4
Tuberculosis, Pneumonic.....	2		2					2
Tuberculosis, Spine.....								
Typhoid Fever.....	3	17	14	34	31			2
Tumor, Cerebral.....	1	1	2		2			
Vomiting, Pregnancy.....			3	3	1	2		
Pregnancy.....			3	3			3	
Confinements.....	1		58	59	59			58
Births.....	1	30	25	56	53			54
Premature.....	2	1	3					3
Still Born.....	1	2	3					3
ISOLATION HOSPITAL								
Diphtheria.....		19	20	39	33	1		
Scarlet Fever.....		1	1	1	1			1
Totals.....	14	162	185	361	248	51	5	39
						4	39	349
								12

SURGICAL CASES

DISEASES	ADMITTED			DISCHARGED			In Hospital Dec. 1, 1910	In Hospital Dec. 1, 1911
	In Hospital		Totals	Well	Improved	Unimproved		
	Males	Females						
Abortion.....			16	16	14	2		
Abscess, Gluteal.....	1		1		1			1
Abscess, Hip.....	1		1		1			1
Abscess, Pelvic.....		3	3	1	1			
Abscess, Perinephritic.....	2		2		1			1
Abscess, Scalp.....	1	1	1	1				
Abscess, Peritonsillar.....	1		1					
Abdominal Puncture.....	1		1	1	1			1
Adenitis, Cervical.....	7	6	13		5	8		13
Adenooids.....	2	1	3	1	2			3
Ankylosis, Elbow.....	1		1			1		1
Appendicitis, Acute.....	1	17	6	24	23	1		24
Appendicitis, Catarrhal.....	1	5	11	17	15	1		16
Appendicitis, Chronic.....	1	3	10	14	12	1		13

SURGICAL CASES (*Continued*)

DISEASES	ADMITTED			DISCHARGED			In Hospital Dec. 1, 1910	In Hospital Dec. 1, 1911		
	In Hospital		Totals	Well		Improved	Unimproved	Not Treated	Died *	Totals
	Males	Females		Well	Improved					
Appendicitis, Perforated.....	1	4	2	7	4	1			1	6
Appendicitis, Purulent.....	1	3	2	6	3	2			1	6
Appendicitis, Peritonitis.....	1	1	1	1	1					1
Arthritis, Gonorrheal.....	1	1	1		1					1
Arthritis, Rheumatoid.....	1	2	2		1		1			2
Arthritis.....	1	2	3		3					3
Burns, Hand.....	1	1	1		1					1
Burns, Multiple.....	1	1	1		1					1
Burns, Whole Body.....	1	1	1					1	1	1
Bursitis, Olecranon.....		1	1		1					1
Calculus, Renal.....	1	1	1					1	1	1
Carbuncle, Neck.....	2	2	2	1	1					2
Carcinoma, Breast.....		3	3	2	1					3
Carcinoma, Stomach.....	1	1	1							1
Carcinoma, Uterus.....		5	5		2	1		1	4	1
Cellulitis, Thumb.....	1	1	1		1					1
Cellulitis, Pelvic.....		1	1		1					1
Cholecystitis.....		4	4		3			1	1	4
Cholecystitis, Peritonitis Ruptured.....		1	1	1						1
Cholelithiasis.....	2	2	2	1				1	2	2
Concussion, Brain.....	5	5	5	5	2					5
Contraction, Hand.....	2	2	2	2	2	2				2
Contusion, Back.....	2	1	3	1	1					2
Contusion, Leg.....	4	4	4	2	2	2				4
Crushed Arm.....	2	2	2	2						2
Crushed Feet.....	3	3	3	1	2					3
Crushed Finger.....	4	4	4		4					4
Crushed Leg.....	4	4	4	2	1			1	4	4
Cyst, Ovarian.....	1	3	4	4						4
Cyst, Pionidal.....	1	1	2	1	1					2
Cystocele.....		1	1	1		1				1
Dislocation.....	1	1	1	1						1
Dislocation, Elbow.....	1	1	1	1						1
Dislocation, Cartilage.....	1	1	1	1						1
Dislocation, Clavicle.....	1	1	1	1						1
Dislocation, Hip.....		1	1	1		1				1
Dislocation, Thumb.....		1	1	1						1
Empyema.....		1	1	1				1	1	1
Endometritis.....	1	15	16	9	7					16
Enteroptosis.....		1	1		1					1
Entropian.....	1	1	1		1					1
Epiphyseal Separation Radius and Ulna.....	1	1	1		1					1
Epithelioma, Face.....		1	1		1					1
Epithelioma, Lip.....	3	3	3	2	1					3
Epithelioma, Vulva.....		1	1	1						1
Extra Uterine Pregnancy.....		2	2	1	1					2
Fistula in Ano.....	2	2	2	1	1					2
Furunculosis, Auditory Meatus.....	1	1	1	1						1
Fracture, Clavicle.....	2	2	2		1					1
Fracture, Femur.....	1	6	8	15	7	5				12
Fracture, Fibula.....		1	2	3	2	1				3
Fracture, Humerus.....	11	2	13	4	9					13
Fracture, Humerus, Compound.....	1	1	1	1						1
Fracture, Radius.....	4	1	5	3	2					5
Fracture, Radius and Ulna.....	3	3	3		3					3
Fracture, Os Calcis.....	1		1		1				4	1
Fracture, Skull.....	5		5	1					5	5
Fracture, Spine.....	1		1	1						1
Fracture, Tibia.....	4	1	5	1	1				2	3

SURGICAL CASES (*Continued*)

DISEASES	ADMITTED			DISCHARGED			In Hospital Dec. 1, 1910	In Hospital Dec. 1, 1911	
	In Hospital		Totals	Well		Unimproved	Not Treated		
	Males	Females		Improved	Died				
Fracture, Tibia, Compound.	1	3	1	1		1		1	
Fracture, Tibia and Fibula.			4	4		4		4	
Fracture, Tibia and Fibula Compound.	3	3	3	2	1			3	
Fracture, Pelvis.	2	2	2	1	2			2	
Fracture, Patella.	1	1	2	1	1			2	
Gangrene, Senile, Toe.		1	1					1	
Gangrene, Senile, Leg.	1		1	1				1	
Genu, Valgus.	3	3	3	3				3	
Genu, Varus.	1	1	1		1			1	
Gave Skin for Grafting.	1		1	1				1	
Hemorrhages, Internal.	2		2				2	2	
Hemorrhage, Post Operative following Tonsilectomy.		1	1			1		1	
Hemorrhage, Retina.		1	1			1		1	
Hemorrhoids.	4	3	7	6	1			7	
Hernia, Femoral.		3	3	3				3	
Hernia, Inguinal.	11	2	13	9	2			11	
Hernia, Strangulated.	1	2	3	1	1			2	
Hydronephrosis.	2		2	1	1			2	
Hydrosalpinge.		2	2	1	1			2	
Hydrocele.	1		1	1				1	
Indigestion, Acute.	1		1	1				1	
Intrarsusception.	1	1	2				2	2	
Keratitis.	1		1	1				1	
Mastoiditis.		2	2	2				2	
Multiple Injuries.	1		1	1				1	
Necrosis, Phalanx.	1		1		1			1	
No Diagnosis.	6	4	10	2		4		6	
Obstruction, Intestinal.		1	1				1	1	
Otitis Media, Chronic.		1	1			1		1	
Ophthalmia, Purulent.		1	1			1		1	
Ophthalmritis, Pan.	1		1		1			1	
Osteomyelitis, Femur.	1		1		1			1	
Osteomyelitis, Radius.	3	1	4	3	1			4	
Osteomyelitis, Tibia.	1		1	1				1	
Osteomalacia.		1	1				1	1	
Paralysis following Anterior Polyomyelitis.	1	2	3	2		1		3	
Peritonitis, T. B.		1	1		1			1	
Periostitis, Tibia.	1		1		1			1	
Phymosis.	1		1	1				1	
Polyp, Nasal.		1	1		1			1	
Rupture, Kidney.	1		1		1			1	
Sacroiliac Disease.		1	1					1	
Salpingo, Oophritis.	1		1	1				1	
Salpingitis, Acute.		5	5	3	2			5	
Salpingitis, Chronic.		1	1	1				1	
Sarcoma, Femur.	1		1					1	
Sarcoma, Ovary.	1		1	1				1	
Sepsis, Face.		1	1	1				1	
Sepsis, Finger.	1	2	3	2	1			3	
Sepsis, Foot.	2		2		2			2	
Sepsis, Hand.	2	1	3	1	2			3	
Sepsis, Leg.	1		1		1			1	
Sepsis, Toe.	1		1		1			1	
Septum, Deviated Nasal.	1	1	2	1	1			2	
Spleen Hypertrophy.	1		1		1			1	
Spur Astragalus.	1		1		1			1	
Stricture Urethra.	5		5	1	4			5	
Syphilis.	1		1			1		1	

SURGICAL CASES (*Continued*)

DISEASES	ADMITTED				DISCHARGED				In Hospital Dec. 1, 1910	Totals	In Hospital Dec. 1, 1911	
	Males	Females		Totals	Well	Improved	Unimproved		Not Treated	Died		
Synovitis, Acute.....	1	1		1	1	6	6				1	
Talipes, Planus.....	1	5		6	2	6	6					
Tonsils Hypertrophy.....	4	4		8	4	33						
Tonsils and Adenoids Hypertrophy.....	21	16		37	1	1	2	1			37	
Torticollis.....	1	4		5								
Tuberculosis, Hip.....	1	1		1	1	1	1					
Tuberculosis, Knee.....	1	1		3	1	1	2				1	
Tuberculosis, Spine.....	3	3		3							1	
Turbinates, Hypertrophy.....	1	1		2								
Tumor, Lipoma.....	2	1		3	2	1	2					
Tumor, Ovary.....		4		4	1	1	2					
Ulcer, Gastric, Perforated.....	1	1		2	1							
Ulcer, Duodenal.....	1	1		2	1	1						
Ulcer, Leg.....		1		1	1						1	
Ulcer, Varicose Leg.....	3	4		7	6	1					7	
Uterus, Fibroid.....		3		3	2	1						
Uterus, Prolapse.....		4		4	3	1					4	
Uterus, Retroflexion.....		2		2	1	1					2	
Varicocele.....	1			1	1							
Wound, Punctured Knee.....	1			1	1						1	
Wound, Hand.....	1	1		3		2						
Wound, Scalp.....	2			2	1	1					2	
Wound, Scrotum.....	1			1							1	
Wound, Lacerated Face.....		1		1	1						1	
Wound, Lacerated Finger.....	4			4	1	3					4	
Wound, Lacerated Wrist.....	1			1			1				1	
Wound, Gunshot Abdomen.....	1			1	1						1	
Wound, Gunshot, Face.....	1			1		1					1	
Wound, Gunshot, Hand.....	1	1		2	1		1				2	
Wound, Gunshot, Knee.....	2			2	2						2	
Wound, Gunshot, Thigh.....	1			1		1					1	
Wound, Gunshot, Wrist.....	1			1		1					1	
Totals.....	19	272	224	505	229	207	8	11	23	478	27	

SUMMARY OF PATIENTS TREATED FROM DEC. 1, 1910 TO
DEC. 1, 1911

	Medical	Surgical	Male	Female	Total
Remaining Nov. 30, 1910.....	14	19	18	15	33
December, 1910.....	23	38	35	26	61
January, 1911.....	32	46	35	43	78
February	37	48	48	37	85
March.....	39	36	33	42	75
April.....	38	32	31	39	70
May.....	29	37	34	32	66
June.....	25	30	20	35	55
July.....	31	61	49	43	92
August.....	25	49	38	36	74
September.....	25	37	29	33	62
October	25	37	30	32	62
November.....	18	35	29	24	53
Totals	361	505	429	437	866

OPERATIONS.

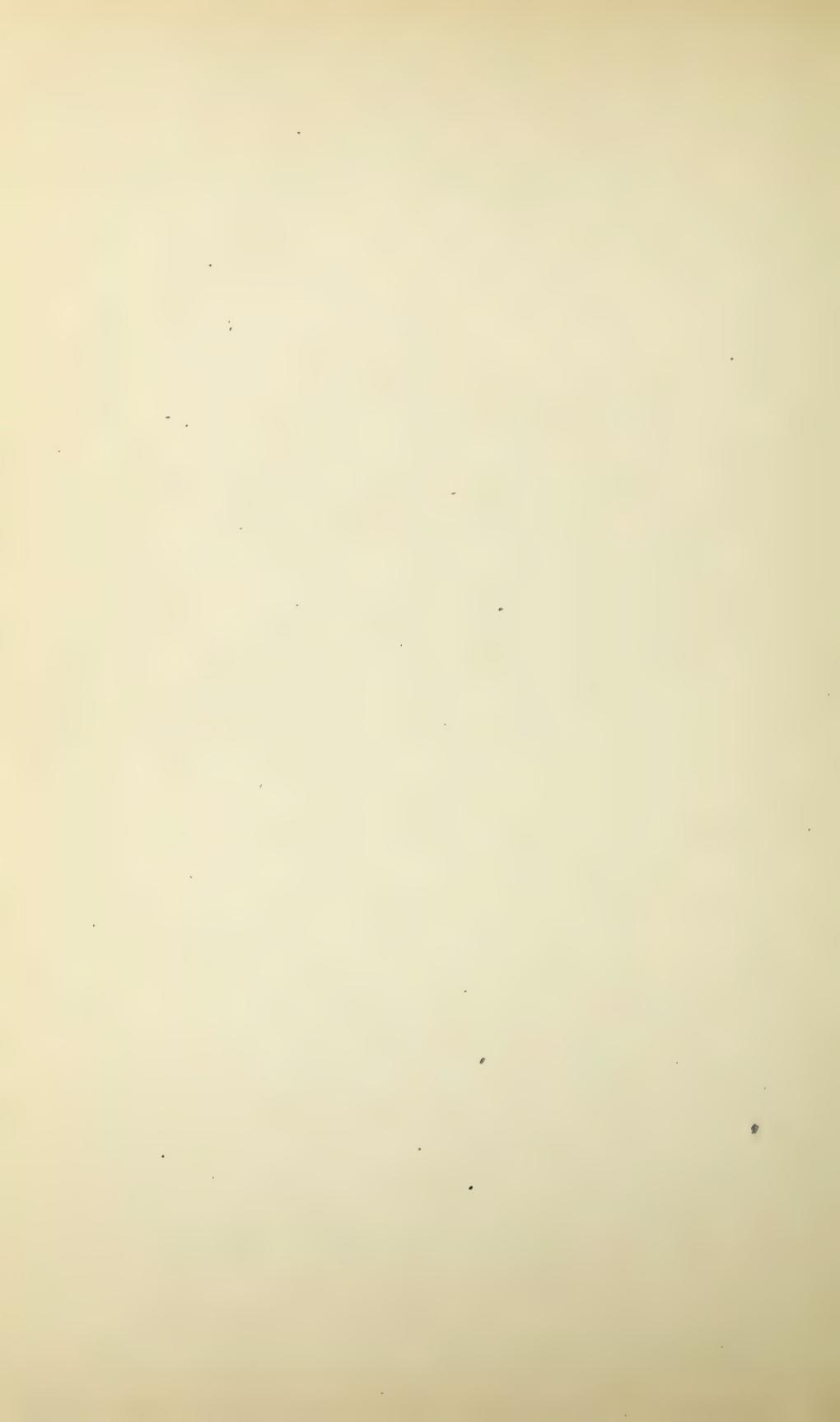
ABDOMINAL SECTIONS—Appendicitis.

	Cases
Appendectomy,	74
Cholecystectomy,	2
Choledochostomy,	1
Exploratory Laporotomy,	4
Extra-uterin Pregnancy,	2
Hysterectomy,	4
Intusseception, (reduced)	3
Gastro-enterostomy, post,	1
Ovariotomy,	2
Salpingectomy,	5
Salpingo-Oophorectomy,	6
Ventro-fixation, Uteri,	4

	Cases
Amputations :	
Arm,	2
Fingers,	7
Foot,	3
Leg,	3
Thigh,	2
Toes,	2
Breast,	3
Circumcision,	2
Curetted :	
Sinus Tibia,	1
Sinus Mastiod,	1
Uterus,	33
Glands,	3
Sinus of Thigh,	1
Dislocations :	
Shoulder,	1
Ether Examinations,	3
Excisions :	
Vaginal Glands,	1
Adenoids and Tonsils,	47
Ganglion of Wrist,	1
Angioma of Scalp,	3
Epithelioma of Lip,	3
Finger,	1
Face,	1
Elbow,	1
Cervical Glands,	6
Foreign Bodies,	2
Floating Cartilage of Elbow,	1
Hemorrhoids :	
Clamp and Cautery,	1
Excision and Suture,	7
Hydrocele; Aspiration,	2
Fractures :	
Patella,	1
Clavicle,	2
Femur, Compound,	2
Humerus,	8

	Cases
Tibia, Compound,	3
Radius,	4
Fibula,	1
Tibia and Fibula,	4
Skull, Compound,	3
Herniotomy :	
Inguinal,	15
Femoral,	3
Strangulated Femoral,	2
Strangulated Inguinal,	1
Incised and Curetted :	
Abscess, Parotid,	1
Pelvic,	2
Ischio-rectal,	4
Scalp,	1
Perinephritic,	2
Cervical,	3
Fistula in Ano,	2
Sepsis :	
Hand,	3
Elbow,	1
Finger,	3
Sepsis of Knee,	1
Tuberculosis of Knee,	2
Thigh,	1
Plastic Operations :	
Perineorrhaphy,	3
Gastrorrhaphy,	2
Ectropion of Eye,	1
Skin Grafting,	1
Deviated Nasal Septum,	1
Sutured :	
Tendons,	4
Wounds :	
Face,	1
Hand,	1
Leg,	1
Head, Incised,	1
Scalp,	4

	Cases
Ankle,	1
Thoracotomy :	
Empyæma,	1
Tracheotomy,	1
Myotomy Torticulis,	3
Osteotomy,	3
Tenotomy,	2
Urethrotomy,	2
Gun-shot Wounds :	
Abdomen,	1
Hand,	2
Head,	1
Total,	<hr/> 361



REPORT OF PATHOLOGIST, BACTERIOLOGIST AND ELECTRO-THERAPEUTIST

To the Trustees of Burbank Hospital:

GENTLEMEN:—The report of the work done by me as Bacteriologist, Pathologist and Electro-Therapeutist, during 1911, is herewith respectfully submitted:

Bacterial count of milk,	8
Bacterial count of ice cream,	2
Smears:	
For diphtheria.	Positive 1, negative 3,
For gonococcus.	Positive 4, negative 4,
To determine infecting organism	Colon,
Staphylococcus,	8
Streptococcus,	4
Pneumococcus,	3
Bacillus aerogenes capsulatus,	1
Examination of Sputum :— For Bacillus tuberculosis.	
Positive 3, negative 12,	15
For Pneumococcus.	Positive 11,
Cultures incubated and examined.	
Colon bacillus,	2
Staphylococcus,	9
Streptococcus,	3
For diphtheria.	Positive 9, negative 15,
Examination of stool,	2
Examination of serous fluids.	
Abdominal 1, spinal 2,	3
Examination of gastric contents,	1
Analysis of urine,	59
Complete blood examinations,	17
Widal reaction for typhoid.	
Positive 3, negative 14, atypical 4,	21
Microscopic examination of tissues.	
Sarcoma 1, carcinoma 3, non-malignant 8,	12

X-ray results have been more uniformly satisfactory, owing to the addition of a sufficient number of tubes and good tube-stand.

RADIOGRAPHS.

	Negative	Fractures	Dislocations	Foreign Bodies	Disease of Bone	Disease of Soft Tissues	Totals
Head.....	.....	2	.....	1	2	.....	5
Neck.....	6	2	.....	5	3	.....	16
Thorax.....	1	.....	.....	.....	.....	3	4
Shoulder.....	.....	16	2	.....	.....	.....	18
Arm.....	.....	13	.....	.....	.....	.....	13
Elbow.....	.....	3	1	.....	1	1	6
Forearm.....	.....	7	.....	.....	1	.....	8
Wrist.....	1	5	.....	1	1	.....	8
Hand.....	.....	2	1	.....	1	.....	4
Abdomen.....	7	.....	.....	.....	.....	1	8
Pelvis.....	2	3	.....	.....	1	1	7
Hip.....	1	23	.....	.....	5	.....	29
Thigh.....	1	14	.....	.....	4	.....	19
Knee.....	.....	3	.....	2	8	.....	13
Leg.....	1	25	.....	1	3	.....	26
Ankle.....	.....	4	.....	.....	3	.....	8
Foot.....	.....	1	.....	.....	3	.....	4
 Totals.....	 20	 123	 4	 10	 33	 6	 196

Respectfully submitted,

C. H. JENNINGS, M. D.

GRADUATES OF THE TRAINING SCHOOL FOR NURSES

1896

- Mrs. McLane, nee Whalen, care of John Whalen, So. Fitchburg.
Mrs. Tabor nee Whelby, 34 Jay street, Somerville, Mass.
Miss Ellen T. O'Connor, 115 Beech street, Fitchburg, Mass.
Miss Eleanor Bradley, Merriam avenue, Leominster, Mass.

1897

- Miss Caroline Garland, Grand street, Leominster, Mass.
Miss Margaret Masterson, 181 Water street, Fitchburg, Mass.

1898

- Miss Sophia Grant, Maple street, Fitchburg, Mass.
Miss Eva Ballantine, India.
Miss Elsie McRobbie, 113 Spier avenue, Allenhurst, N. J.
Miss Esther Woodcome, 22 Pleasant street, Fitchburg, Mass.
Miss Katherine Mahoney, 22 Pleasant street, Fitchburg, Mass.

1899

- Miss Elmer Mercer, 61 Pleasant street, Fitchburg, Mass.
Mrs. A. P. Lowell, nee Hines, 40 Prichard street, Fitchburg,
Mass.
Miss Ada Whyte, Oneonta, N. Y.
Miss Myrtle S. Joy, 14 So. Main street, Barre, Vt.
Miss Louise McEchron, 716 Union street, Hanson, N. Y.

1900

- Miss Annie P. Riley, Groton, Mass.
Miss Ellen V. Griffin, care of Cushing Hospital, Boston, Mass.
Miss Florence A. Lee, 1848 Main street, Athol, Mass.
Miss Eleanor Whitney, Natick, Mass.
Miss Jennie Billings, 54 Arlington street, Fitchburg, Mass.
Miss Lenora McComiskey, 129 Hinman street, Boston, Mass.

1901

- Miss Florence Piper, 126 Hudson street, Somerville, Mass.
Miss Agnes Donlan, 8 Otis street, Fitchburg, Mass.
Miss Carrie Wiggin, 946 South Court street, Los Angeles, Cal.
Miss Sybil Mason, 464 Main street, Fitchburg, Mass.
Miss Minnie Brown, Riverside, Colo.

1902

- Miss Ethel Greene, 137 Newbury street, Portland, Me.
Miss Stella Kelley, 184 Ashburnham street, Fitchburg, Mass.
Miss Lillian Dunn, 184 Ashburnham street, Fitchburg, Mass.
Miss Katherine O'Connor, 115 Beach street, Fitchburg, Mass.
Miss Alice Lawrence, 26 Highland avenue, Fitchburg, Mass.

1903

- Miss Minnie Brennan, 279 Millbury street, Worcester, Mass.
Miss Mabel Daggett, 62 Grove street, Fitchburg, Mass.
Miss Eva Adams, Box 125, Fitchburg, Mass.
Miss Eleanor Smith, 50 Carleton street, Newton, Mass.
Mrs. R. Jones nee Laventure, 4 Ashburnham street, Fitchburg,
Mass.
Miss Edith Belyea, 29 Bishop street, Montreal, Can.
Miss Annie Heslam, Pearl Hill, Fitchburg, Mass.
Miss Dora Scott, 8 Vernon street, Gardner, Mass.

1904

- Miss Elizabeth Merriam, Culibru, Canal Zone.
Miss Lizzie Gorman, Holyoke, Mass.
Miss Bertha Richardson, 62 Highland avenue, Fitchburg, Mass.
Miss Geneveve Whyte, 17 State street, Oneonta, N. Y.
Miss Margaret Fairbanks, 120 Academy street, Fitchburg, Mass.

1905

- Miss Bertha Nash, 236 First street, Pittsfield, Mass.
Miss Lena Gorman, 31 Commercial street, Holyoke, Mass.
Miss Daisy Vellerman, 252 North Main street, Orange, Mass.
Miss Lida Caso, Sartell P. O., Springfield, King's Co., N. B.
Miss Myrtle McComiskey, 39 Grand street, Leominster, Mass.
Miss Jeannie Ferrari, Pearl street, Fitchburg, Mass.

Miss Nellie Weston, Townsend, Mass.

Miss Elizabeth Linehan, 82 Myrtle avenue, Fitchburg, Mass.

1906

Miss Lillian Finnegan, 102 Highland avenue, Fitchburg, Mass.

Miss May McDermott, Quinapoxet, Mass.

Miss Edith Barbour, 235 Cabot street, Beverly, Mass.

Miss Annie Scally, Otter River, Mass.

Miss Sadie Anderson, Fredericton, N. B.

1907

Miss Sophia Gresnich, 18 Lincoln street, Fitchburg, Mass.

Miss Nina Rogers, 4 Ashburnham street, Fitchburg, Mass.

Miss Sarah Belyea, Round Hill, Kings Co., N. B.

Miss Frances Goulding, 65 Eaton street, West Fitchburg.

Miss Ella Ward, 9 Whitcomb street, Webster, Mass.

Miss Lucie Brown, Quinaponet, Mass.

Miss Ethel Craig, King's Park Hospital, King's Park, N. Y.

1908

Miss Gene Gibson, 53 South Main street, Rutland, Vt.

Miss Ada Jones, Groton, Mass.

Miss Minnie Spragg, Springfield, Kings Co., N. B.

Miss Margaret Venable, 1700 Massachusetts avenue, Washington, D. C.

Mrs. Jonas Pierce, nee Leland, Hastings Hall, Fitchburg, Mass.

1909

Miss Alice Haddow, 287 Trumbull street, Hartford, Conn.

Miss Clara Lemay, 14 Lincoln street, Fitchburg, Mass.

Mrs. Charles McMurray, nee Smollins, 178 Blossom street, Fitchburg, Mass.

Miss Caroline Miller, Westminster, Vt.

Miss Josephine O'Connor, 115 Beach street, Fitchburg, Mass.

1910

Miss Helen Lambert, 100 Park street, New Bedford, Mass.

Miss Annie Spring, 60 Heywood street, Fitchburg, Mass.

Miss Nellie Connors, 13 Lincoln street, Fitchburg, Mass.

Miss Helen Foote, 90 Myrtle avenue, Fitchburg, Mass.

Miss Katherine McKeown, 65 Eaton street, Fitchburg, Mass.

1911

Miss Lulu Greene, 578 Main street, Worcester, Mass.

Miss Alice Howe, 76 Prichard street, Fitchburg, Mass.

Miss Margaret McDonald, 21 Beacon street, Fitchburg, Mass.

Miss Bessie Wright, Westminster, Vt.

Miss Grace Johnson, 201 Park street, New Bedford, Mass.

DONATIONS

Woman's Club — Furnishings for one private room:— Painting walls, white enamel bed, hair mattress with cover, 2 feather pillows, 1 hair pillow, special wash stand complete, invalid table, bureau, table with glass top, 2 side chairs, morris chair, writing desk, foot-stool, screen, rug, 1 pair window curtains, window shade, 2 bureau and 2 table covers, 3 pairs wool blankets, 2 spreads, electric desk lamp, towel bar, tumbler and tooth brush holder, pin cushion, scrap basket, 4 vases, ink well, blotter pad, pen holder, pen rack, pen wiper and stationery.

Dascomb Wright Memorial room — Furnishings:— White enamel bed, 1 chair, morris chair, foot-stool, large table, small table with glass top, 2 rugs, andirons, electric desk lamp, mirror, window curtains and shades, bath robe and slippers, memorial tablet.

United Workers of C. C. Church materials and sewing:— Face cloths, baby bands, night gowns, special bandages, nurses' caps.

FLOWERS:— Bijou Amusement Co., Whalom Opera Co., Charles Manchester, Miss Eddy, National Flower and Fruit Guild, Dr. Budden, Mrs. Jonas Pierce, Mrs. Alvah Crocker, J. Fuller, Major Dwinnell, Mrs. B. L. Rich.

MAGAZINES — Mrs. Alvah Crocker, Mayor F. O. Hardy, Mrs. Benjamin, Mrs. W. C. Tenney, Helen Putnam, Fred N. Dillon, Mrs. Holbrook.

R. B. Lyons, books for nurses and patients. [Kings Daughters Rollstone Church, toys, pictures and magazines.

Mrs. Sarah Brown, vases, Mrs. C. T. Crocker, Jr., candy, Mrs. S. S. Tilton, old cloth for compress, Mrs. Dow, complete furnishings for invalid care and old cloth for compress.

DAILY PAPERS — Fitchburg Sentinel, Daily News, North Star Printing Co.

THIRTY-NINTH
ANNUAL REPORT
OF
THE CITY AUDITOR
OF THE
CITY OF FITCHBURG
MASSACHUSETTS
1911



FITCHBURG :
H. M. DOWNS PRINTING CO.
1912

REPORT OF CITY AUDITOR

OFFICE OF CITY AUDITOR,
CITY OF FITCHBURG,
December 12, 1911.

To the Honorable, the City Council:

GENTLEMEN:—In compliance with Section 8, Chapter 2, of the Revised Ordinances of 1906, I have the honor to submit herewith the following report, which shows the appropriations, receipts, expenditures and balances of the various departments of the City of Fitchburg for the financial year ending November 30, 1911, and other statements that have been deemed of interest to the tax payers of the city.

As a preface, the arrangement is made up in accordance with Section 1, Chapter 296, Acts of 1906, of the State of Massachusetts, relative to Municipal Accounting Officers, which I trust will be of interest to you.

Very truly yours,
F. D. PAGE,
City Auditor.

Arranged upon the Schedule for
Uniform Municipal Accounting, as issued by the
Bureau of Statistics and Labor
of the
Commonwealth of Massachusetts

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Totals
GENERAL REVENUE			
TAXES			
Current Year			
Property }			
Poll }	\$484,710 13		
Previous Year			
Property }			
Poll }	142,556 10		
From the State			
Corporation	42,490 70		
Street Railway	3,053 56		
Bank	1,878 10		
Total from Taxes	\$674,688 59		\$674,688 59
LICENSES AND PERMITS			
Licenses			
Liquor	\$49,524 00		
All others	2,333 90		
Permits			
Marriage	419 00		
All others			
Total for Licenses and Permits	\$52,276 90		\$52,276 90
FINES AND FORFEITS			
Court	\$2,400 83		
Contract Violations			
Total for Fines and Forfeits	\$2,400 83		\$2,400 83
GRANTS AND GIFTS			
Grants for Civic Divisions			
From State			
High School Tuitions	\$86 50		
From County (Dog Licenses) for Schools or			
Libraries	1,855 62		
Gifts from Individuals			
Total from Grants and Gifts	\$1,942 12		\$1,942 12

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
COMMERCIAL REVENUE			
SPECIAL ASSESSMENTS			
Street Sprinkling			
Moth Extermination			
Sewers			
Sidewalks and Curbing	\$2,903 90		
Other Purposes	1,045 78		
	668 60		
Total from Special Assessments	\$4,618 28		\$4,618 28
PRIVILEGES			
Public Service			
Minor	\$4,263 31		
Total from Privileges	\$4,263 31		\$4,263 31

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
DEPARTMENTAL, GENERAL GOVERNMENT			
Legislative			
Executive			
Financial			
Auditor and Auditing	\$12 40		
Treasurer	96 15		
Collector			
Assessors			
License Commissioners	307 60		
Other Financial Officers			
Other General Departments			
Superintendant of Buildings	19 00		
Municipal Buildings			
City Hall	983 25		
Police Court Room (rent from County)	400 00		
Dwelling House, West Fitchburg	70 62		
Total from General Government	\$1,889 02		\$1,889 02

PAYMENTS—CLASSIFIED BY OBJECTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
DEPARTMENTAL, GENERAL GOVERNMENT			
Legislative			
Aldermen and Council			
Salaries and Wages			
Other Expenses	\$291 58		
Executive			
Mayor			
Salaries and Wages	2,000 00		
Other Expenses	102 95		
Financial			
Auditor and Auditing			
Salaries and Wages	1,613 60		
Other Expenses	254 31		
Treasurer			
Salaries and Wages	2,780 00		
Other Expenses	802 56		
Collector			
Salaries and Wages			
Other Expenses			
Assessors			
Salaries and Wages	3,931 80		
Other Expenses	784 71		
License Commissioners			
Salaries and Wages	700 00		
Other Expenses	693 10		
Other General Departments			
Law			
Salaries and Wages	1,000 00		
Other Expenses	63 52		
City Clerk			
Salaries and Wages	2,647 25		
Other Expenses	439 62		
City Messenger			
Salaries and Wages	800 00		
Other Expenses	17 83		
Engineering			
Salaries and Wages	4,041 00		
Other Expenses	517 21		
Superintendent of Buildings			
Salaries and Wages	1,278 23		
Other Expenses	209 46		
Election and Registration			
Salaries and Wages	1,372 00		
Other Expenses	1,857 43		
Other General Departments			
Clerk of Committees			
Salaries and Wages	250 00		
Dog Constable			
Salaries and Wages	994 90		
Claim Agent			
Salaries and Wages	50 00		
Municipal Buildings			
Salaries and Wages	2,474 47		
Other Expenses	2,263 11		
Boiler Insurance	327 80		
Total for General Government	\$34,658 44		\$34,658 44

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
PROTECTION OF PERSONS AND PROPERTY			
Police Department			
Services of Officers	\$480 02		
Sale of Material			
Miscellaneous	135 00		
Sale of Horse			
Fire Department			
Sale of Material	3 00		
Miscellaneous			
Sale of Horse	275 00		
Inspection			
Inspection of Buildings			
Sealing of Weights and Measures	297 25		
Other Protection of Persons and Property			
Total from Protection of Persons and Property	\$1,190 27		\$1,190 27
HEALTH AND SANITATION			
Health			
Quarantine and Contagious Disease Hospitals	\$487 57		
Tuberculosis	29 07		
Miscellaneous	55 50		
Inspection			
Sanitation			
Sewers and Sewage Disposal	151 86		
Sewer Construction			
Other Health and Sanitation			
Total from Health and Sanitation	\$724 00	\$1,448 42	\$2,172 42

PAYMENTS—CLASSIFIED BY OBJECTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
PROTECTION OF PERSONS AND PROPERTY			
Police Department			
Salaries and Wages	\$37,047 16		
Horses and care of same	314 12		
Equipment and Repairs	791 25		\$3,200 00
Fuel and Light	727 58		
Maintenance of Buildings and Grounds	326 39		
Other Expenses	889 66		
Fire Department			
Salaries and Wages	40,298 03		
Horses and care of same	2,985 28		
Equipment and Repairs	1,553 26		
Fuel and Light	2,353 25		
Maintenance of Buildings and Grounds	1,464 90		
Other Expenses	3,387 11		
Militia			
Armories			
Rifle Ranges	2,250 14		
Inspection			
Inspection of Wires	1,200 00		
Sealing of Weights and Measures	1,042 08		
Forestry			
Insect Pest Extermination	3,812 98		
Planting and Trimming Trees	652 94		
Total for Protection of Persons and Property	\$101,096 13	\$3,200 00	\$104,296 13
HEALTH AND SANITATION			
Health			
General Government	\$4,419 83		
Quarantine and Contagious Diseases	4,948 30		
Tuberculosis	4,147 62		
Vital Statistics	480 40		
Other Expenses	568 68		
Inspection			
Inspection of School Children	842 54		
Inspection of Animals	400 00		
Inspection of Meats and Provisions	600 00		
Inspection of Milk and Vinegar	46 26		
Sanitation			
Sewer Maintenance and Operation	10,386 92		
Sewer Construction		\$95,292 21	
Refuse and Garbage Disposal	4,116 73		
Other Health and Sanitation			
Total for Health and Sanitation	\$30,957 28	\$95,292 21	\$126,249 49

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
HIGHWAYS (INCLUDING BRIDGES)			
General Construction	\$2,232 20	\$69 09	
Sidewalks and Curbings	211 33	386 09	
Sprinkling Water	61 51		
Oil			
Miscellaneous	5,552 55		
Paving Construction	293 85	170 31	
Total from Highways (including Bridges)	\$8,351 44	\$625 49	\$8,976 93
CHARITIES			
Almshouse			
Sale of Produce and Stock	\$963 69		
Miscellaneous			
Reimbursements			
From Individuals			
From Other Cities and Towns	676 88		
From the State	725 03		
Miscellaneous	282 60		
Total from Charities	\$2,648 20		\$2,648 20
SOLDIERS' BENEFITS			
State Aid	\$4,472 00		
Military Aid	322 00		
Soldiers' Burials	222 00		
Soldiers' Relief	88 00		
Total from Soldiers' Benefits	\$5,104 00		\$5,104 00
EDUCATION			
Tuition of State Wards			
Other Tuition	\$633 00		
Sale of Text Books and Supplies	136 52		
Miscellaneous	8 00		
Total from Education	\$777 52		\$777 52

PAYMENTS—CLASSIFIED BY OBJECTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
HIGHWAYS (INCLUDING BRIDGES)			
General Administration	\$4,353 64		
General Highway Expenditures	60,803 23		
Construction		\$42,355 22	
Sidewalks and Curbings	3,801 56	17,491 12	
Snow and Ice Removal	2,508 32		
Sprinkling			
Water	5 891 95		
Oil	3,252 75		
Lighting	35,371 75		
Other Expenses			
Street Flushing Machine		1,000 00	
Total for Highways (including Bridges)	\$116,983 20	\$59,846 34	\$176,829 54
CHARITIES			
General Administration	\$1,630 74		
Almshouse	8,856 02		
Outside Relief by City	6,635 69		
Relief given by Other Cities and Towns	1,278 47		
Hospitals			
Municipal General	16,000 00		
Other Expenses	566 80		
Total for Charities	\$34,967 72		\$34,967 72
SOLDIERS' BENEFITS			
General Administration			
State Aid	\$4,321 00		
Military Aid	594 00		
Soldiers' Burials	74 00		
Soldiers' Relief	8,467 70		
Total for Soldiers' Relief	\$13,456 70		\$13,456 70
EDUCATION			
General Expenses			
Administrative Salaries	\$2,700 00		
Other General Salaries	1,797 00		
Other General Expenses	6,291 72		
Teachers' Salaries	107,002 87		
Text Books and Supplies	6,471 10		
Tuition			
Transportation	1,970 00		
Support of Truants	60 46		
Janitors' Services	10,275 36		
Fuel and Light	9,319 44		
Maintenance of Buildings and Grounds	9,992 43		
Other Expenses			
Total for Education	\$155,880 38		\$155,880 38

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
LIBRARIES			
Fines, Rentals and Sales	\$247 52		
Miscellaneous	184 00		
Totals from Libraries	\$431 52		\$431 52
RECREATION			
Parks and Gardens			
Playgrounds and Celebrations and Entertainments	\$243 20		
Total from Recreation	\$243 20		\$243 20
UNCLASSIFIED			
Receipts not recorded elsewhere	\$15 00		
Total from Unclassified	\$15 00		\$15 00
PUBLIC SERVICE ENTERPRISES			
Electric			
Gas			
Water			
Income from Sale of Water	\$81,397 81		
Miscellaneous	11,821 46		
Income from Sale of Service Pipe			
Total from Public Service Enterprises	\$92,719 27		\$92,719 27
CEMETERIES			
Sale of Lots and Graves	\$1,550 00		
Care of Lots and Graves	4,050 29		
Miscellaneous			
Grading	500 00		
Total from Cemeteries	\$6,100 29		\$6,100 29

PAYMENTS—CLASSIFIED BY OBJECTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
LIBRARIES			
Salaries and Wages	\$5,070 60		
Books, Periodicals, etc.	2,343 22		
Binding	191 83		
Fuel and Light	835 69		
Buildings	260 24		
Other Expenses	717 16		
Total for Libraries	\$9,418 74		\$9,418 74
RECREATION			
General Administration			
Parks			
Salaries and Wages	\$5,935 95		
Other Expenses	539 50		
Playgrounds			
Salaries and Wages	3,085 14		
Improvements and Additions		\$8,099 70	
Other Expenses	3,428 36		
Celebrations and Entertainments			
Fourth of July	280 00		
Total for Recreation	\$13,268 95	\$8,099 70	\$21,368 65
UNCLASSIFIED			
Damages to Persons and Personal Property	\$2,198 75		
Memorial Day	575 00		
City Clocks	110 00		
Payments not recorded under previous Classifications			
Printing	2,399 11		
Purchase of Land	1,550 00		
Total for Unclassified	\$7,379 67		\$7,379 67
PUBLIC SERVICE ENTERPRISES			
Electric			
Gas			
Water			
Maintenance and Operation	\$67,832 19		
Construction		\$4,420 02	
All Other			
Total for Public Service Enterprises	\$67,832 19	\$4,420 02	\$72,252 21
CEMETERIES			
Maintenance	\$9,654 01		
Improvements and Additions		\$1,161 05	
Total for Cemeteries	\$9,654 01	\$1,161 05	\$10,815 06

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
INTEREST			
On Deposits			
On Deferred Taxes	\$5,671 61		
Miscellaneous			
Total from Interest	\$5,671 61		\$5,671 61
MUNICIPAL INDEBTEDNESS			
Loans in Anticipation of Taxes		\$570,000 00	
Loans for General Purposes		27,500 00	
Loans for Public Service Enterprises		117,000 00	
Premiums		1,374 45	
Total from Municipal Indebtedness		\$725,874 45	\$725,874 45
SINKING FUNDS			
General Purposes			
Public Service Enterprises			
Total from Sinking Funds			
AGENCY, TRUST AND INVESTMENT TRANSACTIONS			
Agency			
Taxes			
State			
County			
Non-resident Bank			
Reimbursements for Abolition of Grade Crossings		\$38,318 05	
Trust			
Perpetual Care Funds		2,100 00	
Other Public Permanent Trust Funds		65 00	
Investments			
Sinking Fund Securities			
Total from Agency, Trust and Investment Transactions		\$40,483 05	\$40,483 05
REFUNDS			
Taxes			
Licenses			
Accrued Interest		\$375 00	
All Other			
Total Refunds		\$375 00	\$375 00

PAYMENTS—CLASSIFIED BY OBJECTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
INTEREST			
On Loans in Anticipation of Taxes	\$9,815 86		
On Other Temporary Loans			
On Loans for General Purposes	36,838 50		
On Loan for Public Service Enterprises			
Water	20,825 00		
All Other			
Total for Interest	\$67,479 36		\$67,479 36
MUNICIPAL INDEBTEDNESS			
Loans in Anticipation of Taxes		\$549,500 00	
Bonds and Notes from Revenue			
General	\$86,839 50		
Public Service Enterprises	5,000 00		
Total from Municipal Indebtedness	\$91,839 50	\$549,500 00	\$641,339 50
SINKING FUNDS			
For Debt Requirements			
From Taxes, Earnings, Etc.	\$25,300 00		
Total from Sinking Funds	\$25,300 00		\$25,300 00
AGENCY, TRUST AND INVESTMENT TRANSACTIONS			
Agency			
Taxes			
State	\$44,041 00		
Non-resident Bank	5,649 04		
County	28,313 00		
Liquor Licenses remitted to the State	12,381 00		
Abolition of Grade Crossings	39,990 71		
Widening Tin Bridge	2,285 44		
All Other	342 62		
Trust			
Perpetual Care Funds			
Other Permanent Public Trust Funds	538 71		
Investment			
Total for Agency, Trust and Investment Transactions			\$133,541 52
			\$133,541 52
REFUNDS			
Taxes		\$51 99	
Licenses			
Special Assessments		4,795 87	
General Departments			
Total Refunds			\$4,847 86
			\$4,847 86

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Transfers from Sundry Accounts	Total
DEPARTMENTAL		
Street Maintenance	\$3,989.72	
Street Construction	16,073.01	
Sidewalk Maintenance	223.37	
Sidewalk Construction	18,743.71	
Sewer Maintenance	1,948.17	
Sewer Construction	13,124.01	
Paving Maintenance	3,340.07	
Paving Construction	16,444.41	
Macadam Maintenance	9,215.98	
Macadam Construction	5,010.05	
Street Watering and Oiling	7,492.71	
Street Lighting	371.75	
Fifth Street Bridge	5,731.34	
Bemis Road Bridge Alterations	3,094.37	
Widening Tin Bridge	1,798.49	
Rollstone Street Grade Crossing	9,154.58	
State Normal School Playgrounds	5,000.00	
Meetinghouse Pond Land Account	785.40	
Wachusett Lake Land Account	9,214.60	
Fire Department	2,958.93	
Police Department	3,811.32	
Public Burial Grounds	1,569.40	
Laurel Street Retaining Wall	563.81	
Public Parks	8,597.33	
Public Playgrounds	8,099.70	
Printing	346.61	
Salaries	1,932.53	
School Teachers' Salaries	1,664.87	
Assessors' Plans	500.00	
City Auditor	9.41	
City Clerk	65.75	
Diphtheria Epidemic	3,090.10	
Soldiers's Relief	179.70	
Board of Health	3,366.31	
House Offal	25.86	
Interest on General Debt	1,514.05	
Burbank Hospital	7,000.00	
School Incidentals and Books	3,197.48	
Engineering	1,560.21	
Gypsy Moth Extermination	2,312.98	
Improved Sewer System	100,030.50	
Repairs and Care	5,204.33	
Public Library	450.00	
Sewer Disposal	3,772.75	
Electron Expenses	115.63	
Incidentals	43,108.35	
Support of Poor	293.67	
State Aid	4,299.60	
Military Aid	584.00	
Cemetery Lots, Endowed	1,764.49	
Trust Funds, Worthy Poor	503.31	
Taxes of 1911	76,165.17	
Taxes of 1906-7-8-9-10	1,632.52	
City of Fitchburg	100,000.00	
Debts Receivable	35.35	
Sidewalk Assessments	795.49	
Sidewalk Assessments Apportioned	935.70	
Sewer Assessments	1,790.55	
Sewer Assessments Apportioned	2,128.36	
Street Betterment Assessments	67.50	
Street Betterment Assessments Apportioned	16.00	
Commonwealth of Massachusetts	5,656.21	
Taxes Abated	8,629.52	
Total Transfers	\$541,600.49	\$541,600.49

PAYMENTS—CLASSIFIED BY OBJECTS

OBJECTS OF PAYMENTS	Transfers from Sundry Accounts	Total
DEPARTMENTAL		
Street Maintenance	\$3 50	
Street Construction	759 99	
Sidewalk Maintenance	133 14	
Sidewalk Construction	865 42	
Sewer Maintenance	171 39	
Sewer Construction	3,800 17	
Paving Maintenance	358 28	
Paving Construction	144 27	
Macadam Maintenance	361 72	
Macadam Construction	168 31	
Street Watering	409 52	
Fifth Street Bridge	1 25	
Police Department	1 40	
Laurel Street Retaining Wall	8 15	
Public Parks	125 65	
Assessors' Plans	500 00	
Diphtheria Epidemic	205 46	
Board of Health	43 56	
Interest on General Debt	2,717 80	
School Incidentals and Books	20 35	
Engineering	2 00	
Improved Sewer System	126 07	
Repair and Care	47 80	
Public Library	23 54	
Incidentals	53,368 75	
Cemetery Endowed Lots, Trust Funds	1,549 25	
Worthy Poor, Trust Funds, Maria Whitcomb Fund	12 00	
Taxes of 1911	23,992 23	
Taxes of 1910	3,172 47	
City of Fitchburg	200,000 00	
Debts Receivable	4,798 98	
Support of Poor	2,206 28	
Dwelling House, West Fitchburg	70 62	
Tax Collector's Fees	96 15	
Assessors' Clerical	89 20	
Assessors' Incidentals	15 29	
City Treasurer	42 44	
Sealer of Weights and Measures	7 92	
Pay Roll Tailings	191 98	
Sales of Real Estate	92 01	
Interest on Temporary Loans	6,251 69	
Sidewalk Assessments	5,133 38	
Sidewalk Assessments Apportioned	718 97	
Sewer Assessments	2,833 55	
Sewer Assessments Apportioned	1,790 55	
Street Betterment Assessments	915 81	
Street Betterment Assessments Apportioned	67 50	
Commonwealth of Massachusetts	48,624 35	
Taxes Abated	8,577 53	
Almshouse	63 00	
Water Maintenance	113 15	
Liquor Licenses	37,143 00	
Water Loans	100,000 00	
Water Rates	28,663 70	
Total Transfers	\$541,600 49	\$541,600 49

RECEIPTS—CLASSIFIED BY SOURCES

SOURCES OF RECEIPTS	Cash Balances	Total
BALANCES		
General	\$1,632,696 78	
Trust Funds (Public)	2,165 00	
Transfers	541,600 49	
Total	\$2,176,462 27	
Total Cash on Hand Beginning of the Year	39,346 78	
Grand Total Receipts and Cash on Hand,	\$2,215,809 05	\$2,215,809 05

PAYMENTS—CLASSIFIED BY OBJECTS

OBJECTS OF PAYMENTS	Cash Balances	Total
BALANCES		
General	\$1,614,780 97	
Sinking Fund	25,300 00	
Transfers	541,600 49	
Total	\$ 2,181,681 46	
Total Cash on Hand End of Year	34,127 59	
Grand Total Payments and Cash on Hand	\$2,215,809 05	\$2,215,809 05

AUDITOR'S REPORT
ARRANGED AS IN FORMER YEARS

APPROPRIATIONS

FOR RUNNING EXPENSES RECOMMENDED BY THE FINANCE
COMMITTEE FOR THE YEAR 1911.

Assessors' Clerical,	\$450 00
Assessors' Incidentals,	800 00
Board of Health,	10,000 00
Engineering,	3,000 00
City Auditor,	425 00
City Clerk,	1,500 00
City Treasurer,	1,500 00
Fire Department,	48,500 00
Gypsy Moth Extermination,	1,500 00
House Offal,	3,000 00
Lighting Streets,	35,000 00
Police Department,	36,144 00
Printing,	2,000 00
Public Burial Grounds,	2,000 00
Public Parks,	4,000 00
Public Library,	6,500 00
Repair and Care,	31,000 00
Salaries,	20,799 38
School Teachers' Salaries,	110,000 00
School Incidentals and Books,	9,000 00
Street Department :	
Macadam Maintenance,	4,000 00
Sewer Maintenance,	3,500 00
• Sidewalk Maintenance,	3,500 00
Street Maintenance,	32,000 00
Paving Maintenance,	6,000 00
Watering,	1,500 00

Soldiers' Relief,	\$8,200 00
Support of Poor,	17,000 00
Sealer of Weights and Measures,	250 00
Burbank Hospital,	9,000 00
Total amount for running expenses,	\$412,068 38

APPROPRIATIONS RECOMMENDED BY THE FINANCE COMMITTEE TO PAY MATURING INDEBTEDNESS, INTEREST,
STATE AND COUNTY TAXES, AND SINKING FUNDS FOR THE YEAR 1911.

General Sinking Fund,	\$2,500 00
School Loan Sinking Fund,	4,500 00
Sewer Loan Sinking Fund,	1,500 00
State Normal School Loan Sinking Fund,	800 00
Water Loan Sinking Fund,	16,000 00
Depot Street Bridge Loan,	2,000 00
Fire Department Loans,	1,344 50
Grade Crossing Loan,	3,000 00
Lowe Play Ground Loan,	300 00
Municipal Loan, 1909,	11,000 00
Municipal Loan, 1910,	4,000 00
Oak Hill Road Bridge Loan,	700 00
Paving Loans,	7,125 00
Public Park Loan,	300 00
School Loans,	16,400 00
Sewer Loans,	5,145 00
Sidewalk Loans,	3,725 00
Street Construction Loans,	31,800 00
Water Loans,	5,000 00
Interest on Temporary Loans, .	9,000 00
Interest on Water Debt,	20,825 00
Interest on General Funded Debt,	36,838 50
County Tax,	28,313 00
State Tax,	43,835 00
State Highway Tax,	206 00
Total for Maturing Indebtedness, etc.,	\$256,157 00
Total for Running Expenses brought down,	412,068 38
Total appropriations for the year,	\$668,225 38

APPROPRIATIONS, RECEIPTS, EXPENDITURES AND BALANCES FOR THE YEAR 1911

REPORT OF CITY AUDITOR

DEPARTMENT ACCOUNTS

APPROPRIATIONS TO PAY MATURING INDEBTEDNESS, INTEREST, ETC., FOR 1911

CONSTRUCTION ACCOUNT

MISCELLANEOUS ACCOUNTS

*To be covered by Loan.

§ Expense divided

† Reimbursed

RECAPITULATION FOR 1911

UNEXPENDED BALANCES

Department Accounts,	\$19,921 93
Construction Accounts,	15,640 15
Miscellaneous Accounts,	26,117 26
Maturing Indebtedness,	9,769 53
<hr/>	
Total Unexpended Balances,	\$71,448 87
 Balances carried to 1912,	
Copying Old Records,	\$432 90
Public Burial Grounds,	81 71
Interest on Temporary Loans,	2,972 14
Interest on Water Debt,	545 70
Depot Street Bridge,	23 00
Water Construction,	178 05
Improved Sewer System,	15,439 10
Normal School Playgrounds,	4,072 99
Wachusett Lake Land Account,	2,006 97
<hr/>	
Total of Balances deducted,	\$25,752 56
 Net Credit Balance,	\$45,696 31

OVERDRAWN BALANCES

Department Accounts,	\$37,588 16
Construction Accounts,	563 81
Miscellaneous Accounts,	8,817 19
Maturing Indebtedness,	1,514 05
<hr/>	
Total Overdrawn Balances,	\$48,483 21
 Balances carried to 1912,	
Widening Tin Bridge,	\$682 57
Rollstone Street Grade Crossing Assessment,	4,752 52
<hr/>	
Total of Balances deducted,	\$5,435 09
 Net Debit balance,	
Net Credit Balance carried forward to 1912,	\$43,048 12
All other balances carried to the Incidental Account.	\$2,648 19

CASH RECEIPTS FOR 1911.

DEPARTMENT REVENUE.

Almshouse,	\$963 69
Outside Poor,	1,412 84
Board of Health,	666 64
Dwelling House, West Fitchburg,	70 62
Fire Department,	278 00
Incidentals	2,970 65
Police Department,	3,015 85
Printing,	320 00
Public Library,	2,287 14
Public Parks,	243 20
Repair and Care Account,	1,402 25
Soldiers' Relief,	88 00
School Incidentals and Books,	856 02
School Teachers' Salaries,	8 00
Public Burial Grounds	6,100 29
Street Departments,	
Street Maintenance,	7,593 15
Street Construction,	3 44
Macadam Maintenance,	1,955 92
Macadam Construction,	65 65
Sidewalk Maintenance,	211 33
Sidewalk Construction,	386 09
Paving Maintenance,	293 85
Paving Construction,	170 31
Street Watering,	61 51
Street Betterment Assessments,	668 60
Sidewalk Assessments,	973 82
Sidewalk Assessments Apportioned,	71 96
Sewer Department,	
Improved Sewer System,	523 59
Sewer Assessments,	2,512 50
Sewer Assessments Apportioned,	391 40
Sewer Maintenance,	151 86
Sewer Construction,	924 83
Water Department,	
Water Rates,	81,397 81
Service Pipe,	11,321 46
Total Department Revenue,	————— \$130,362 27

GENERAL REVENUE.

Interest Accounts,

General Debt,	\$1,203 75
Temporary Account,	5,671 61
Liquor Licenses,	•49,524 00
Interest on Water Bonds,	545 70
Debts Receivable,	5,824 22
State Aid,	22 00
Military Aid,	10 00
Rollstone Street Grade Crossing,	38,274 70
Rollstone Street Grade Crossing Asst.,	43 35
Tax Collector's Fees,	96 15
Taxes,	
1911	\$484,710 13
1910	135,283 85
1909	4,928 68
1908	2,285 09
1907	58 48
	\$627,266 23

Trust Funds,

Endowed Cemetery Lots,	2,100 00
Jonas Marshall,	65 00
Bills Payable,	670,000 00
Commonwealth of Massachusetts	49,352 80
Municipal Loan of 1910, General,	37,500 00
Municipal Loan of 1910, Water,	17,000 00
<hr/>	<hr/>
Total General Revenue,	\$1,504,499 51
Total Department Revenue,	130,362 27
<hr/>	<hr/>
Total Cash Receipts for 1911,	\$1,634,861 78

SUMMARY.

Cash Balance in Treasury, December 1st, 1910,	\$39,346 78
Total Receipts for year ending November 30th, 1911,	1,634,861 78
<hr/>	<hr/>
Total cash	\$1,674,208 56
Total Expenditures (cash) for 1911,	1,640,080 97
<hr/>	<hr/>
Balance cash on hand November 30th, 1911, carried forward,	\$34,127 59

EXPENDITURES.

CASH PAYMENTS ON ACCOUNT OF THE SEVERAL DEPARTMENTS FOR THE YEAR 1911.

Almshouse,	\$8,856 02
Outside Poor,	8,544 90
Assessors' clerical,	360 80
Assessors' incidentals,	784 71
Bills payable,	549,500 00
Board of Health,	13,989 39
Burbank Hospital,	16,000 00
Bemis Road Bridge (Grade Crossing)	2,711 73
City Auditor, incidentals,	434 41
City Clerk, incidentals,	1,565 75
City Treasurer, incidentals,	1,457 56
City Bonds, serial issues,	91,839 50
Commonwealth of Massachusetts,	6,065 66
County Tax,	28,313 00
Diphtheria epidemic,	2,884 64
Engineering,	4,558 21
Election expenses,	115 63
Fifth Street Bridge,	5,730 09
Fire Department,	51,736 93
Gypsy Moth Extermination,	3,812 98
House Offal,	3,025 86
Improved Sewer System,	84,988 92
Incidentals,	14,540 22

Interest,

On General Debt,	\$36,838 50
On Temporary Loans,	9,815 86
On Water Debt,	20,825 00
Laurel Street Retaining Wall,	1,161 05
Liquor Licenses,	12,381 00
Military Aid,	594 00
Normal School Playgrounds,	927 01
Police Department,	42,969 77
Printing,	2,666 61
Public Library,	9,213 60
Public Parks,	12,714 88
Public Playgrounds,	8,099 70
Public Burial Grounds,	9,654 01
Repair and Care Account,	37,558 78
Rollstone Street Grade Crossing,	37,278 98
Rollstone Street Grade Crossing, Assessment,	4,795 87
Sealer of Weights and Measures,	242 08
Soldiers' Relief,	8,467 70
State Aid,	4,321 00
State Tax,	43,835 00
State Highway Tax,	206 00
Sinking Fund Payments, General,	9,300 00
Water Loan,	16,000 00
Salaries,	22,731 91
School Incidentals,	6,562 05
School Books,	6,471 10
School Teachers' Salaries,	111,672 87
Street Department, Street Maintenance,	43,579 37
Street Construction,	15,100 68
Street Lighting,	35,371 75
Street Watering,	9,144 70
Sidewalk Maintenance,	3,801 56
Sidewalk Construction,	17,491 12
Macadam Maintenance,	14,810 18
Macadam Construction,	4,907 39
Paving Maintenance,	9,275 64

Paving Construction,	\$16,617	06
Sewer Maintenance,	5,428	64
Sewer Construction,	10,303	29
Taxes Abated,	51	99
Trust Funds,		
E. M. Boutelle-Robinson fund,	17	40
Ellen E. Armes fund,	17	50
Jonas Marshall fund,	65	00
Nathan Whitcomb fund,	266	18
E. G. Poole fund,	172	63
Widening Tin Bridge,	2,285	44
Water Department,		
Water Maintenance,	67,832	19
Wachusett Lake land,	3,737	27
Meeting House Pond land,	682	75
Total cash payments for 1911,		\$1,640,080 97

STREET MAINTENANCE.

RECEIPTS.

Appropriation,	\$32,000	00
Cash items from Commissioners,	191	36
Commonwealth of Mass., Street		
Railway, Franchise Tax,	3,053	56
Fitchburg & Leominster Street		
Railway, Franchise Tax,	3,508	20
Worcester Consolidated Street		
Railway, Franchise Tax,	563	27
Gardner, Westminster & Fitchburg		
Street Railway, Franchise Tax,	191	84
Boston & Maine R. R. Co., refunded,	84	92
Transfers :		
Street Construction,	\$424	60
Street Watering,	46	56
Paving Maintenance,	327	78
Paving Construction,	121	97
Macadam Maintenance,	361	72
Macadam Construction,	161	81
Sidewalk Maintenance,	55	08

Sidewalk Construction,	\$377 72
Sewer Maintenance,	73 69
Sewer Construction,	1 92
Engineering,	2 00
Repair and Care Account,	9 30
Public Parks,	12 50
Almshouse,	63 00
Incidentals,	5 00
Debts receivable,	353 04
	—————
	\$2,397 69
Total receipts,	\$41,990 84
Debit transfer to incidentals,	1,592 03
	—————
	\$43,582 87

EXPENSES.

Pay rolls,	\$32,857 69
Merchandise and sundries,	10,721 68
Transfers:	
Paving Construction,	3 50
	—————
	\$43,582 87

STREET CONSTRUCTION.

RECEIPTS.

Receipts from Commissioners	\$3 44
Transfers:	
Street betterments assessments,	\$915 81
Debts receivable,	1 60
	—————
	\$917 41
Included in Municipal Loan	
of 1911,	15,155 60
	—————
	\$16,076 45

EXPENSES.

Balance from 1910,	\$215 78
Pay rolls,	\$9,071 30
Damages for street construction :	
B. E. Sawyer,	\$347 06
Michael Burns,	750 00
McNamara & Coughlin,	991 90
R. S. Waters,	300 00
J. Weidlich,	15 00
	—————
	\$2,403 96
Merchandise and Sundries,	3,625 42
Transfers:	
Street maintenance,	\$424 60
Engineering,	204 10
Sewer construction,	96 29
Paving construction,	20 00
Debts receivable	15 00
	—————
	\$759 99
	—————
	15,860 67
	—————
	\$16,076 45

PAVING MAINTENANCE.

RECEIPTS.

Appropriation,	\$6,000 00
By Street Commissioners,	293 85
Transfers:	
From Liquor licenses,	\$1,000 00
From Debts receivable,	33 14
	—————
	\$1,033 14
	—————
	\$7,326 99
Deficit balance carried to Incidentals,	2,306 93
	—————
	\$9,633 92

EXPENSES.

Pay rolls,	\$8,598 78
Merchandise and sundries,	676 86

Transfers:

Street maintenance,	\$327 78
Paving construction,	30 50
	<hr/>
	\$358 28
	<hr/>
	\$9,633 92

PAVING CONSTRUCTION.

RECEIPTS.

Credit balance from 1910,	\$146 61
From Street Commissioners,	101 94
From Fitchburg Gas & Electric Light	
Company,	68 37

Transfers:

Debts receivable,	\$1,437 57
Sidewalk mainten-	
ance,	17 50
Sidewalk construction,	132 50
Street construction,	20 00
Paving maintenance,	30 50
Street maintenance,	3 50
	<hr/>
	\$1,641 57
	<hr/>
	\$1,958 49
Balance included in Municipal Loan	
of 1911,	\$14,802 84
	<hr/>
	\$16,761 33

EXPENSES.

Pay rolls,	\$6,817 37
Merchandise and sundries,	9,799 69
Transfers:	
Street maintenance,	\$121 97
Engineering,	22 30
	<hr/>
	\$144 27
	<hr/>
	\$16,761 33

MACADAM MAINTENANCE.

RECEIPTS.

Appropriation,	\$4,000 00
From Street Commissioners,	1,955 92

Transfers :

From Liquor Licenses,	\$6,000 00
From Debts receivable,	246 52
From Sewer maintenance,	23 91
	—————
	\$6,270 43
	—————
	\$12,226 35
Deficit balance carried to Incidental account,	2,945 55
	—————
	\$15,171 90

EXPENSES.

Pay rolls,	\$7,054 89
Merchandise and sundries,	7,755 29
Transfers :	
From Street maintenance,	361 72
	—————
	\$15,171 90

MACADAM CONSTRUCTION.

RECEIPTS.

From Street Commissioners,	\$65 65
Transfers :	
Sewer maintenance,	\$26 99
Debts receivable,	128 70
	—————
	\$155 69
	—————
	\$221 34
Balance included in Municipal Loan of 1911,	4,854 36
	—————
	\$5,075 70

EXPENSES.

Pay rolls,	\$2,189 99
Merchandise and sundries,	2,717 40
Transfers :	
Street maintenance,	\$161 81
Engineering,	6 50
	—————
	\$168 31
	—————
	\$5,075 70

SEWER MAINTENANCE.

RECEIPTS.

Appropriation,	\$3,500 00
From Sewer Commissioners,	151 86
Transfers:	
Debts receivable,	56 32
	<hr/>
	\$3,708 18
Deficit balance carried to Incidental account,	1,891 85
	<hr/>
	\$5,600 03

EXPENSES.

Pay rolls,	\$5,100 78
Merchandise and sundries,	327 86
Transfers:	
Sidewalk construction,	\$38 42
Macadam maintenance,	23 91
Macadam construction,	26 99
Sidewalk maintenance,	3 38
Improved Sewer System,	5 00
Street maintenance,	73 69
	<hr/>
	\$171 39
	<hr/>
	\$5,600 03

SEWER CONSTRUCTION.

RECEIPTS.

Credit balance from 1910,	\$54 62
From Sewer Commissioners,	878 48
From Crocker, Burbank & Co.,	36 35
From Union Foundry Co.,	10 00
Transfers:	
Assessments for 1911,	\$2,833 55
Debts receivable,	1,030 85
Street construction,	96 29
	<hr/>
	\$3,960 69
	<hr/>
	\$4,940 14
Balance included in Municipal Loan of 1911,	9,163 32
	<hr/>
	\$14,103 46

EXPENSES.

Pay rolls,	\$6,892 13
Merchandise and sundries,	3,411 16
Transfers :	
Sewer Disposal Account	
(old) :	\$3,772 75
Improved Sewer System,	25 50
Street maintenance,	1 92
	—————
	\$3,800 17
	—————
	\$14,103 46

SIDEWALK MAINTENANCE.

RECEIPTS.

Appropriation,	\$3,500 00
From Street Commissioners,	211 33
Transfers :	
Debts receivable,	219 99
Sewer maintenance,	3 38
	<hr/>
	\$223 37
	<hr/>
	\$3,934 70

EXPENSES.

Pay rolls,	\$932 10
Merchandise and sundries,	2,869 46
Transfers:	
Street maintenance,	\$55 08
Paving construction,	17 50
	\$72 58
	\$3,874 14
Credit balance carried to incidental account,	60 56
	\$3,934 70

SIDEWALK CONSTRUCTION.

RECEIPTS.

From Street Commissioners,	\$386 09
Transfers:	
Assessments for 1911,	\$5,133 38
Debts receivable,	426 51
Sewer maintenance,	38 42
	—————
	\$5,598 31
	—————
	\$5,984 40
Balance included in Municipal	
Loan of 1911,	13,145 40
	—————
	\$19,129 80

EXPENSES.

Pay rolls,	\$10,591 74
Merchandise and sundries,	7,672 64
Transfers:	
Sidewalk assessments,	\$76 52
Street maintenance,	377 72
Engineering,	278 68
Paving construction,	132 50
	—————
	\$865 42
	—————
	\$19,129 80

STREET WATERING.

RECEIPTS.

Appropriation,	\$1,500 00
From Street Commissioners,	61 51
Transfers:	
Assessments for 1911,	\$7,958 77
Debts receivable,	33 94
	—————
	\$7,992 71
	—————
	\$9,554 22

EXPENSES.

Pay rolls,	\$5,500 12
Merchandise and sundries,	3,644 58
Transfers:	
Street maintenance,	46 56
	—————
	\$9,191 26
Credit balance carried to incidental account,	362 96
	—————
	\$9,554 22

FIFTH STREET BRIDGE.

RECEIPTS.

Included in the Municipal Loan of 1911,	\$5,731 34
---	------------

EXPENSES.

McHarg-Barton Company,	\$4,102 09
James H. Fuertes,	1,300 00
H. L. Sherman,	16 00
Merchandise and sundries,	312 00
Transfer:	
Engineering,	1 25
	—————
	\$5,731 34

WIDENING TIN BRIDGE.

RECEIPTS.

Included in Municipal Loan of 1911,	\$1,798 49
Deficit balance carried forward to	
1912,	682 57
	—————
	\$2,481 06

EXPENSES.

Balance from 1910,	\$195 62
Paid Boston & Maine Railroad	
Company,	2,285 44
	—————
	\$2,481 06

BEMIS ROAD BRIDGE ALTERATIONS.

RECEIPTS.

Included in Municipal Loan of 1911,	\$3,094 37
-------------------------------------	------------

EXPENSES.

Paid Boston & Maine Railroad Company,	\$2,711 73
Balance from 1910,	382 64
	<hr/>
	\$3,094 37

DEPOT STREET BRIDGE.

Credit balance carried forward to 1912,	\$23 00
---	---------

GRADE CROSSING, WATER, PUTNAM AND LAUREL STREETS.

Credit balance from 1910 carried forward to 1912,	\$522 82
---	----------

GRADE CROSSING BRIDGE FLOORS, WATER AND PUTNAM STREETS.

Credit balance from 1910 carried forward to 1912,	\$2,742 14
---	------------

GRADE CROSSING, ROLLSTONE STREET.

RECEIPTS.

Fitchburg Railroad Company,	\$22,716 30
Commonwealth of Massachusetts,	12,231 85
Commonwealth of Massachusetts,	3,326 55
	<hr/>
	\$38,274 70
Deficit balance included in Municipal Loan of 1911,	9,154 58
	<hr/>
	\$47,429 28

EXPENSES.

Debit balance from 1910,	\$10,150 30
Geo. H. Priest, <i>et al.</i> ,	26,000 00
H. E. & H. L. Parkhurst,	1,300 00
Parkhill Mfg. Company,	4,023 87
Fitchburg Railroad Company,	4,493 33
Commonwealth of Massachusetts,	950 44
Commonwealth of Massachusetts, interest,	8 34
Four appraisers' services,	400 00
James A. Stiles,	71 45
Sundry small payments,	31 55

	\$47,429 28

ROLLSTONE STREET GRADE CROSSING, STATE ASSESSMENT.

RECEIPTS.

Over-payment of interest returned by state,	\$43 35
Deficit balance carried forward to 1912,	4,752 52

	\$4,795 87

EXPENSES.

Commonwealth of Massachusetts, assessment,	\$4,644 16
Commonwealth of Massachusetts, interest,	151 71

	\$4,795 87

IMPROVED SEWER SYSTEM.

RECEIPTS.

From David A. Hartwell, Chief Engineer,	\$50 07
Rent of cottage,	91 00
J. H. Holland,	285 75
McCarty & Walsh,	48 25
J. H. Kreimer, old lumber,	30 00
Russell K. Proctor, old barn,	15 00
Sundry small items,	3 52

Transfers:

Sewer construction,	\$25 50
Sewer maintenance,	5 00
	—————
	\$30 50
	—————
	\$554 09
Authorized loan of 1911,	100,000 00
	—————
	\$100,554 09

EXPENSES.

Pay rolls,	\$10,900 83
Sundries and merchandise,	8,490 09
Charles C. Walker,	12,245 25
N. Y., N. H. & H. R. R. Company,	1,080 00
Arthur H. Lowe,	892 33
Boston & Maine R. R. Company,	6,462 50
McCarty & Walsh on contract,	35,058 41
Little & Seretto on contract,	7,619 51
John R. Hosmer on contract,	2,240 00
Transfers:	
Engineering,	126 07
	—————
	\$85,114 99
Credit balance carried to 1912,	15,439 10
	—————
	\$100,554 09

STREET LIGHTING.

RECEIPTS.

Appropriation,	\$35,000 00
Deficit balance carried to incidentals,	371 75
	—————
	\$35,371 75

EXPENSES.

Cost of lighting 338 arc lights,	\$29,109 63
Cost of lighting 344 incandescent lights,	5,828 52
Cost of lighting the subway,	301 90
Cost of lighting Wallace Way,	131 70
	—————
	\$35,371 75

WACHUSSETT LAKE LAND ACCOUNT.

RECEIPTS.

Balance included in Municipal Water Loan for 1911,	\$9,214 60
---	------------

EXPENSES.

Deficit balance from 1910,	\$3,470 36
Paid William M. Powell,	2,300 40
George R. Williams,	1,060 00
Desire Beaulieu,	150 00
Appraisers,	58 00
Althea V. Sleeper, services,	150 00
Sundry small expenses,	18 87
	<hr/>
	\$7,207 63
Credit balance carried to 1912,	2,006 97
	<hr/>
	\$9,214 60

MEETING HOUSE POND LAND ACCOUNT.

RECEIPTS.

Balance included in Municipal Water Loan of 1911,	\$785 40
--	----------

EXPENSES.

Deficit balance from 1910,	\$102 65
Paid Dr. A. E. Mossman,	600 00
E. B. Lynde,	76 00
Sundry small payments,	6 75
	<hr/>
	\$785 40

SEWERAGE DISPOSAL.

Deficit balance transferred to Sewer Con- struction,	\$3,772 75
---	------------

WATER MAINTENANCE.

RECEIPTS.

Credit balance from service pipe,	\$13,418 04
Cash from Bruce-Hibbard Electric	
Company,	1 00
Debit balance carried to water rates,	54,526 30
	<hr/>
	\$67,945 34

EXPENSES.

Pay rolls,	\$33,590 17
Merchandise and sundries,	34,242 02
Transfers:	
City Engineering,	113 15
	<hr/>
	\$67,945 34

WATER RATES.

RECEIPTS.

By A. W. F. Brown, Supt.,	\$81,396 81
Due for water November 30, 1911,	7,928 04
	<hr/>
	\$89,324 85

PAYMENTS.

Estimated water receipts transferred to taxes of 1911,	\$25,000 00
Balance from water maintenance,	54,526 30
Balance due for water November 30, 1910,	6,134 85
	<hr/>
	\$85,661 15
Credit balance carried to incidentals,	3,663 70
	<hr/>
	\$89,324 85

SERVICE PIPE.

RECEIPTS.

By A. W. F. Brown, Supt. Water Works,	\$11,321 46
Due for pipe November 30, 1911,	3,683 90
	<hr/>
	\$15,005 36

PAYMENTS.

Due for pipe November 30, 1910,	\$1,587 32
Credit balance carried to water	
maintenance,	13,418 04
	—————
	\$15,005 36

WATER CONSTRUCTION.

Credit balance carried forward to 1912,	\$178 05
---	----------

ENGINEERING.

RECEIPTS.

Appropriation,	\$3,000 00
----------------	------------

Transfers:

Street construction	\$204 10
Sidewalk construction,	278 68
Paving construction,	22 30
Improved Sewer System,	126 07
Water maintenance,	113 15
Public Parks,	30 40
Macadam construction,	6 50
Fifth Street Bridge,	1 25
Assessors' Plans,	500 00
	—————
	\$1,282 45

Deficit balance transferred to the	
incidental account,	277 76
	—————

\$4,560 21

EXPENSES.

Pay rolls,	\$4,041 00
------------	------------

Merchandise and sundries,	517 21
---------------------------	--------

Transfer:

Street maintenance,	2 00
	—————

\$4,560 21

COPYING OLD RECORDS.

Credit balance of 1911, carried forward to 1912,	\$432 90
--	----------

BOARD OF HEALTH.

RECEIPTS.

Appropriation,	\$10,000 00
From Commonwealth, account con-	
tagious diseases,	487 57
Personal reimbursements,	29 07
Dr. F. H. Thompson, Jr., returned,	55 50
Milk licenses,	64 50
Other licenses,	30 00
Transfers :	
Debts receivable,	\$537 13
Diphtheria epidemic,	127 07
	—————
	\$664 20
	—————
	\$11,330 84
Deficit balance carried to Incidental	
account,	2,702 11
	—————
	\$14,032 95

EXPENSES.

Pay rolls,	\$4,449 63
Merchandise and sundries,	8,639 76
Drs. Hitchcock and Thompson, Sr.,	300 00
Dr. H. D. Clark, Inspector,	600 00
Transfer :	
Police Department,	43 56
	—————
	\$14,032 95

ASSESSORS' CLERICAL.

RECEIPTS

Appropriation,	\$450 00
----------------	----------

EXPENSES.

Pay roll for assistants,	\$360 80
Credit balance carried to Incidental	
account,	89 20
	—————
	\$450 00

ASSESSORS' INCIDENTALS.

RECEIPTS.

Appropriation,	\$800 00
----------------	----------

EXPENSES.

Poll lists (100),	\$294 00
Tax bills (18,500),	27 00
Tax returns,	20 50
Assessors' notices,	71 19
Horace J. Stevens,	75 00
Miscellaneous expenses,	297 02
	<hr/>
	\$784 71

Credit balance carried to Incidental account,	15 29
	<hr/>

\$800 00

ASSESSORS' PLANS.

RECEIPTS.

From Incidental account by transfer,	\$500 00
--------------------------------------	----------

EXPENSES.

City Engineering by transfer,	\$500 00
-------------------------------	----------

CITY AUDITOR, INCIDENTALS.

RECEIPTS.

Appropriation,	\$425 00
----------------	----------

Deficit balance carried to Incidental account,	9 41
	<hr/>

\$434 41

EXPENSES.

Florence A. Shattuck, assistant,	\$213 60
----------------------------------	----------

Merchandise and sundries,	220 81
	<hr/>

\$434 41

CITY CLERK, INCIDENTALS.

RECEIPTS.

Appropriation,	\$1,500 00
Deficit balance carried to Incidental	
Account,	65 75
	—————
	\$1,565 75

EXPENSES.

Services of assistants,	\$1,147 25
Supplies etc.,	418 50
	—————
	\$1,565 75

CITY TREASURER, INCIDENTALS.

RECEIPTS.

Appropriation,	\$1,500 00

EXPENSES.

Services of assistants,	\$780 00
Miscellaneous expenses,	677 56
	—————
	\$1,457 56
Credit balance carried to Incidental	
account,	42 44
	—————
	\$1,500 00

BURBANK HOSPITAL MAINTENANCE.

RECEIPTS.

Appropriation,	\$9,000 00
Transfer : Incidental account,	7,000 00
	—————
	\$16,000 00

EXPENSES.

Payments to Henry A. Willis, Treasurer of Trustees,	\$16,000 00
--	-------------

FIRE DEPARTMENT.

RECEIPTS.

Appropriation,	\$48,500 00
From sale of horse,	275 00
From sale of rubber goods,	3 00
	—————
	\$48,778 00
Deficit balance carried to Incidental account,	2,958 93
	—————
	\$51 736 93

EXPENSES.

Pay roll, call men,	\$10,278 07
Pay roll, regular men,	31,219 96
Merchandise and sundries,	10,238 90
	—————
	\$51,736 93

GYPSY MOTH EXTERMINATION.

RECEIPTS.

Appropriation,	\$1,500 00
Transfer :	
Taxes of 1911, assessments,	1,840 14
Deficit balance carried to Incidental account,	472 84
	—————
	\$3,812 98

EXPENSES.

Pay rolls including salary of City Forester,	\$3,574 08
Miscellaneous payments,	238 90
	—————
	\$3,812 98

HOUSE OFFAL.

RECEIPTS.

Appropriation,	\$3,000 00
Deficit balance carried to Incidental account,	25 86
	—————
	\$3,025 86

EXPENSES.

R. K. Proctor, contract for collecting,	\$2,617 86
J. H. Smith, contract for collecting,	408 00
	<hr/>
	\$3,025 86

DWELLING HOUSE, WEST FITCHBURG.

RECEIPTS.

From G. W. Marston, rent of house,	\$70 62
------------------------------------	---------

EXPENSES.

Credit balance carried to Incidental account,	\$70 62
---	---------

POLICE DEPARTMENT.

RECEIPTS.

Appropriation,	\$36,144 00
A. Q. Thayer, Marshall, fines and sundries,	480 02
Peter F. Ward, Clerk, fines,	2,400 83
Cash from sale of horse,	135 00
Transfers :	
Diphtheria Epidemic, service of officers,	\$78 39
Board of Health, service of officers,	43 56
Repair and care account, service of officers,	38 50
Incidental account,	3,200 00
	<hr/>
	\$3,360 45
	<hr/>
	\$42,520 30
Deficit balance carried to Incidental account,	450 87
	<hr/>
	\$42,971 17

EXPENSES.

Pay rolls,	\$37,048 16
Merchandise and sundries,	5,921 61
Transfer : School Incidentals,	1 40
	—————
	\$42,971 17

PRINTING.

RECEIPTS.

Appropriation,	\$2,000 00
By License Commissioners, advertising,	307 60
By Treasurer, advertising,	12 40
	—————
	\$2,320 00
Deficit balance carried to Incidental account,	346 61
	—————
	\$2,666 61

EXPENSES.

H. M. Downs Printing Company,	
City Reports (750),	\$1,657 10
City Manuals, (the printing) (1500),	161 36
Poll Lists (75),	48 00
Jury Lists,	25 75
Dog Owners List (100),	67 62
Mayor's Inaugural,	36 00
Liquor applications,	267 50
Miscellaneous items,	403 28
	—————
	\$2,666 61

PUBLIC BURIAL GROUNDS.

RECEIPTS.

Appropriation,	\$2,000 00
Credit balance brought from 1910,	66 03
By Ira G. Wilkins, Treasurer	
of Trustees:	
Sale of and care of lots not endowed,	\$6,100. 29

Transfers :

Care of endowed lots,	\$1,549 25
Care of Nathan Whit-	
comb lots,	12 00
Laurel street retaining	
wall,	8 15
	— — —
	\$1,569 40
	— — —
	\$9,735 72

EXPENSES.

Pay rolls, including salary of Ira G.

Wilkins, Treasurer of Trustees,	\$8,063 05
Merchandise and sundries,	1,590 96
	— — —

\$9,654 01

Credit balance carried forward to 1912,	81 71
	— — —

\$9,735 72

PUBLIC PARKS.

RECEIPTS.

Appropriation,	\$4,000 00
From Seth Lowe,	150 00
By Wm. W. Colton, Supt.,	93 20
	— — —

\$4,243 20

Deficit balance carried to Incidental	
account,	8,597 33
	— — —

\$12,840 53

EXPENSES.

Pay rolls, including Supt. and	
assistants;	\$5,044 29
C. W. Moeckel, contract and extras,	3,049 79
Merchandise and sundries,	4,620 80

Transfers :

Street maintenance,	\$12 50
Engineering,	30 40
Repair and care ac-	
count,	82 75
	— — —
	\$125 65
	— — —

\$12,840 53

PUBLIC LIBRARY.

RECEIPTS.

Appropriation,	\$6,500 00
County of Worcester, dog license fees,	1,855 62
City of Fitchburg, dog license fees, by City Clerk,	184 00
Geo. E. Nutting, Librarian, fines,	247 52
Transfer:	
Interest on note,	450 00
	—————
	\$9,237 14

EXPENSES.

Salary of Librarian and assistants,	\$4,270 60
Books, maintenance, etc.,	4,943 00
Transfer:	
Repair and care account,	22 18
	—————
	\$9,235 78
Credit balance carried to Incidental account,	1 36
	—————
	\$9,237 14

LIQUOR LICENSES.

RECEIPTS.

From 12 fourth-class licenses at \$2,000,	\$24,000 00
16 first-class licences at \$1,500,	24,000 00
5 club licenses at \$300,	1,500 00
24 druggists' licenses at \$1,	24 00
	—————
	\$49,524 00

PAYMENTS.

To Commonwealth of Massachusetts, 25% of gross receipts,	\$12,381 00
Transfers:	
Taxes of 1911,	\$20,000 00

Macadam maintenance,	\$6,000 00
Paving maintenance,	1,000 00
	<hr/>
	\$27,000 00
	<hr/>
	\$39,381 00
Credit balance carried to Incidental account,	10,143 00
	<hr/>
	\$49,524 00

MILITARY AID.

RECEIPTS.

Transfers:

To Commonwealth of Mass.,	\$292 00
To Incidental account,	292 00
George Bartlett, allowance unclaimed,	10 00
	<hr/>
	\$594 00

EXPENSES.

Payments according to Chapter No. 372, Acts of 1899,	\$594 00
---	----------

STATE AID.

RECEIPTS.

Cash allowances unclaimed,	\$22 00
Transfer: To Commonwealth of	
Massachusetts,	4,299 00
	<hr/>
	\$4,321 00

EXPENSES.

Payments according to Chapter No. 374, Acts of 1899,	\$4,321 00
---	------------

REPAIR AND CARE OF BUILDINGS.

RECEIPTS.

Appropriation,	\$31,000 00
Chas. T. Cushing, rent for City Hall,	983 25
County of Worcester, rent of Police	
Court Room,	400 00

John H. Kirby,	\$15 00
Sale of Old Settees,	4 00
Transfers:	
Public Parks,	\$82 75
Public Library,	22 18
	—————
	\$104 93
	—————
	\$82,507 18
Deficit balance carried to Incidental account,	5,099 40
	—————
	\$37,606 58

EXPENSES.

Payments for fuel for schools,	\$8,389 93
Payments for fuel for City Hall,	929 39
Pay roll for school janitors,	10,033 78
Pay roll for night school janitors,	241 58
Pay roll for City Hall janitors,	1,995 21
Pay roll for cleaning City Hall,	479 26
Agnes J. Kirby, assistant,	297 60
Sundry supplies and maintenance,	15,192 03
Transfers:	
Police Department,	
Services of Officers,	\$38 50
Street maintenance,	9 30
	—————
	\$47 80
	—————
	\$37,606 58

SALARIES.**RECEIPTS.**

Appropriation,	\$20,799 38
Transfer: Deficit balance carried to Incidental account,	1,932 58
	—————
	\$22,731 91

PAYMENTS.

Hon. M. Fred O'Connell, mayor,	\$2,000 00
Herbert G. Morse, city treasurer,	2,000 00
Walter A. Davis, city clerk,	1,500 00
F. D. Page, city auditor,	1,400 00

John F. McGrath, city solicitor	\$1,000 00
Dr. Geo. P. Norton, city physician,	1,000 00
John H. Kirby, Supt. of buildings	
part of year,	597 26
John D. O'Keefe, Supt. of buildings	
part of year,	383 37
Horace M. Flynn, assessor,	1,000 00
Ira G. Wilkins, assessor,	1,000 00
E. W. Ackley, assessor part of year,	306 71
Chas. H. Morse, assessor part of year,	693 29
James A. Shea, sealer of weights and	
measures,	800 00
Chas. T. Cushing, city messenger	
and janitor,	800 00
Hon. Arthur H. Lowe, chairman	
sewer commissioners,	2,125 00
David M. Dillon, sewer commissioner,	1,416 64
Daniel A. Boyle, sewer commissioner,	1,416 64
Dr. H. D. Clark, inspector of animals,	400 00
John G. Faxon, clerk of committees	
part of year,	20 84
Harry P. Casey, clerk of committees	
part of year,	229 16
Fred A. Currier, chairman license	
commissioners,	300 00
Patrick J. Murray, license commissioner,	200 00
John E. Dwyer, license commissioner,	200 00
H. C. Hitchcock,	
F. A. Adler,	
A. M. Belliveau,	
C. H. Glazier,	
J. P. Gallagher,	
S. W. Huntley,	
Interpreters,	
Walter A. Davis,	
D. F. Sullivan,	
J. Frank Fisher,	
John B. LaRivieres	
Ward Officers,	656 00

	\$22,731 91

DIPHTHERIA EPIDEMIC.

RECEIPTS.

Deficit balance carried to Incidental account by transfer, . . .	\$3,090 10
---	------------

EXPENSES.

Miscellaneous payments through agency of Board of Health, . . .	\$2,884 64
--	------------

Transfers:

Board of Health, . . .	127 07
Police department, . . .	78 39
	<hr/>
	\$3,090 10

SCHOOL TEACHERS' SALARIES.

RECEIPTS.

Appropriation, . . .	\$110,000 00
Item of cash returned, . . .	8 00

Transfer:

Deficit balance carried to Inci- dental account, . . .	1,664 87
	<hr/>
	\$111,672 87

EXPENSES.

Pay rolls, including salary of Supt. Joseph G. Edgerly, . . .	\$111,672 87
--	--------------

SCHOOL INCIDENTALS AND BOOKS.

RECEIPTS.

Appropriation, . . .	\$9,000 00
Tuitions from pupils, State, . . .	633 00
	86 50

Jos. G. Edgerly, Supt., books and supplies sold, . . .	136 52
---	--------

Transfer:

Police Department, . . .	1 40
	<hr/>
	\$9,857 42

Deficit balance carried to Incidental account, . . .	3,196 08
	<hr/>
	\$13,053 50

EXPENSES.

School books and supplies,	\$6,471 10
For Medical Inspection in schools,	375 50
For salaries, Mr. Upham and Miss	
Hall,	1,797 00
Merchandise and sundries,	4,389 55
Transfer:	
Street maintenance,	20 35
	—————
	\$13,053 50

SOLDIERS' RELIEF.

RECEIPTS.

Appropriation,	\$8,200 00
Payments unclaimed,	88 00
Deficit balance carried to Incidental	
account,	179 70
	—————
	\$8,467 70

PAYMENTS.

Monthly Aid pay rolls,	\$7,230 00
Care of beneficiaries, medicine, etc.,	1,037 70
Sidney Sibley, Agent, salary,	200 00
	—————
	\$8,467 70

SUPPORT OF POOR.

RECEIPTS.

Appropriation,	\$17,000 00
From Commonwealth of Massachu-	
sets,	725 03
Sundry cities and towns,	676 88
Tucker Brothers, refunded,	10 93
Almshouse, by E. Coleman, Supt.,	963 69
Transfer:	
Debts receivable,	293 67
	—————
	\$19,670 20

EXPENSES.

Pay rolls, Mr. Jones, Mr. Humes and assistants,	\$2,098 15
Miscellaneous payments for relief of poor,	6,446 75
Pay rolls at Almshouse, including Superintendent and Matron,	4,734 63
Merchandise and sundries at Almshouse,	4,121 39
Transfer, account Almshouse :	
Street maintenance,	63 00
	—————
Credit balance carried to Incidental account,	\$17,463 92
	—————
	2,206 28
	—————
	\$19,670 20

TAX COLLECTOR'S FEES.

RECEIPTS.

Miscellaneous items,	\$96 15
	PAYMENTS.

Credit balance carried to Incidental account,	\$96 15
--	---------

TAXES ABATED.

RECEIPTS.

Transfers :	
Overlayings for 1911,	\$5,186 65
Assessors' Special Warrant No. 2, 1910,	3,172 47
Assessors' Special Warrant No. 1, 1911,	270 40
	—————
	\$8,629 52

PAYMENTS.

Abated of Taxes of 1911, 1910, 1909,	\$1,176 57 1,364 43 150 32
--	----------------------------------

Abated of Taxes of 1908,	\$109 20
1907,	6 00
1906,	43 16
Total abatements,	\$2,849 68
Credit balance carried to Incidental account,	5,779 84
	\$8,629 52

CITY TREASURER—HERBERT G. MORSE.

RECEIPTS.

Cash balance on hand December 1, 1910,	\$39,346 78
Receipts from all sources for year ending November 30, 1911,	1,634,861 78
	\$1,674,208 56

PAYMENTS.

Mayor's warrants for 1911,	\$1,640,080 97
Cash balance November 30, 1911, forward to 1912,	34,127 59
	\$1,674,208 56

SEALER OF WEIGHTS AND MEASURES.

RECEIPTS.

Appropriation,	\$250 00
----------------	----------

EXPENSES.

Sundry payments,	\$242 08
Credit balance carried to Incidental account,	7 92
	\$250 00

INTEREST ACCOUNT.

RECEIPTS.

Appropriation for General Debt,	\$36,838 50
Appropriation for Temporary Loans Account,	9,000 00

Premium on Bonds of Municipal Loan of 1910,	\$828 75
Accrued Interest on Bonds of Loan of 1910,	375 00
Balance from 1910 @ Temporary Loans Interest,	3,788 00
Miscellaneous receipts @ Taxes etc.,	5,671 61
Transfers:	
Sewer Assessments Apportioned,	\$492 41
Sidewalk Assessments Apportioned,	83 21
Street Betterment Assess- ments Apportioned,	4 46

	\$580 08

	\$57,081 94
Deficit on account General Interest account, to Incidentals,	1,514 05

	\$58,595 99
EXPENSES.	
General Debt, miscellaneous payments,	\$36,838 50
Transfers:	
Cemetery Trust Funds,	\$1,764 49
Public Library Note,	450 00
Nathan Whitcomb Fund,	278 18
E. G. Poole Fund,	172 63
E. M. Boutelle-Robinson Fund,	35 00
Ellen E. Armes Fund,	17 50

	\$2,717 80
Temporary Account, mis- cellaneous payments,	9,815 86
Legal balance forward to 1912,	2,972 14

	\$52,344 30
Credit balance carried to Incidental account,	6,251 69

	\$58,595 99

INTEREST ON WATER BONDS.

RECEIPTS.

Appropriation,	\$20,825 00
Premium on Municipal Loan Bonds	
of 1910,	545 70
	—————
	\$21,370 70

EXPENSES.

Miscellaneous payments by Treas-	
urer,	\$20,825 00
Credit balance carried forward to	
1912,	545 70
	—————
	\$21,370 70

LAUREL STREET, RETAINING WALL.

RECEIPTS.

Balance forward from 1910,	\$605 39
Deficit balance carried to Incidental	
account,	563 81
	—————
	\$1,169 20

EXPENSES.

Pay rolls, labor,	\$470 21
Material for wall,	690 84
Transfers:	
Public Burial Grounds,	8 15
	—————
	\$1,169 20

STATE AND COUNTY TAXES.

RECEIPTS.

Appropriations,	\$72,354 00
EXPENSES.	

State Tax, paid Treasurer of	
Commonwealth,	\$43,835 00
State Highway Tax, paid Treasurer	
of Commonwealth,	206 00
County Tax, paid Edward A. Brown,	
Treasurer of County,	28,313 00
	—————
	\$72,354 00

COMMONWEALTH OF MASSACHUSETTS.

RECEIPTS.

Corporation Tax,	\$42,490 70
National Bank Tax,	1,878 10
State Aid for 1910,	4,450 00
Military Aid for 1910,	312 00
Burial of Soldiers and Sailors,	222 00
Transfer:	
Taxes of 1911, Non-resident	
Bank Tax,	5,566 21
	—————
	\$55,009 01
Deficit balance carried forward to 1912,	3,176 21
	—————
	\$58,185 22

EXPENSES.

Debit balance forward from 1910,	\$3,495 21
Non-resident Bank Tax,	5,649 04
Burial of Soldiers and Sailors, by Ira	
G. Wilkins, agent,	74 00
Corporation and Bank Tax balance,	342 62
Transfers:	
Taxes of 1911, Estimated	
Corporation and	
Bank Tax,	\$30,000 00
Incidentals, Excess of	
Corporation and	
Bank Tax,	14,033 35
State Aid, Chapter No.	
374, Acts of 1899,	4,299 00
Military Aid, Chapter	
No. 372, Acts of	
1899,	292 00
	—————
	\$48,624 35
	—————
	\$58,185 22

PUBLIC PLAYGROUNDS.

RECEIPTS.

Carried to Municipal Loan for 1911,	\$8,099 70
-------------------------------------	------------

EXPENSES.

Paid Carlo Alario,	\$1,000 00
George Ruddy,	1,020 30
McNamara & Coughlin,	2,000 00
Salem Street Playgrounds.	
John O'Donnell,	1,000 00
Patrick Sullivan,	1,000 00
Dennis B. Sullivan,	1,072 70
Margaret Clark,	1,000 00
John F. McGrath, expenses,	6 70
	<hr/>
	\$8,099 70

PAY ROLL TAILINGS.

Credit balance from 1910, carried to Incidental account by transfer,	\$191 98
---	----------

REAL ESTATE SALES FOR NON-PAYMENT OF
TAXES.

Credit balance from 1910, carried to Incidental account by transfer,	\$92 01
---	---------

E. M. BOUTELLE-ROBINSON TRUST FUND.

RECEIPTS.

Credit balance forward from 1910,	\$1,108 65
Transfer :	
General Debt Interest account, interest for 1911,	35 00
	<hr/>
	\$1,143 65

EXPENSES.

Coal and wood for the worthy poor,	\$17 40
Credit balance forward to 1912,	1,126 25
	<hr/>
	\$1,143 65

EDWARD G. POOLE TRUST FUND.

RECEIPTS.

Donation by Mr. Poole in 1905,	\$4,932 38
Transfer :	
General Interest account, interest for 1911,	172 63
	—————
	\$5,105 01

EXPENSES.

Paid Robert M. Jones, Clerk of Poor Department for worthy poor,	\$172 63
Credit balance forward to 1912,	4,932 38
	—————
	\$5,105 01

ELLEN E. ARMES FUND.

RECEIPTS.

Donation by Miss Armes for worthy poor,	\$500 00
Transfer :	
General Interest account, interest for 1911,	17 50
	—————
	\$517 50

EXPENSES.

Paid Robert M. Jones, Clerk of Poor Department for worthy poor,	\$17 50
Credit balance forward to 1912,	500 00
	—————
	\$517 50

JONAS MARSHALL TRUST FUND.

RECEIPTS.

Dividends from Boston & Maine Railroad Company, on invested fund for 1911,	\$65 00
--	---------

EXPENSES.

Paid Robert M. Jones, Clerk of Poor Department for worthy poor,	\$65 00
--	---------

NATHAN WHITCOMB TRUST FUND.

RECEIPTS.

Donation for benefit of worthy poor,	
balance from 1910,	\$7,948 06
Transfer :	
General Debt interest account,	
interest for 1911,	278 18
	—————
	\$8,226 24

EXPENSES.

Paid Robert M. Jones, Clerk of Poor Department, for worthy poor,	\$266 18
Transfer :	
Public Burial Grounds, care of cemetery lot for 1911,	12 00
Credit balance forward to 1912,	7,948 06
	—————
	\$8,226 24

INCIDENTALS.

RECEIPTS.

Credit balance from 1910,	\$24,478 16
City Clerk, receipts,	2,283 40
City Treasurer, receipts for licenses,	125 00
License Commissioners, receipts,	250 00
James A. Shea, Sealer of Weights and Measures, receipts,	297 25
Taylor pasture, rent,	15 00
	—————
	\$27,448 81

EXPENSES.

Election expenses,	\$1,741 80
Sundry damages,	2,198 75
Roddy land, purchased for city dump,	1,090 87
Rifle range expenses,	2,250 14
J. M. O'Neill, dog constable,	994 90
City Solicitor, expenses,	63 52
Mayor's office, expenses,	77 95
License Commissioners, office expenses,	425 60
City Treasurer, registry of bonds,	125 00

City Clerk, special expenses for express,	\$21 12
City Auditor, special expenses,	33 50
Street Department, flushing machine,	1,000 00
G. A. R., Post No. 19, for Memorial	
Day,	450 00
Sons of Veterans, for Memorial Day,	125 00
A. I. Rome, purchase of land,	1,500 00
C. Foley heirs, purchase of land,	50 00
Fourth of July expenses,	280 00
Worcester County Training School,	60 46
Care of city public clocks,	110 00
City Manuals,	363 86
City Directories,	101 50
Birth returns,	343 15
Death returns,	137 25
H. L. Flint, Claim Agent,	50 00
City Hall vaults, repairs,	79 51
City Hall elevator, repairs,	55 73
City Boiler Insurance,	327 80
C. F. Wilson, Pearl Hill Spring Water in City Hall,	26 95
Western Union Tel. & Tel. Co., service at Central Fire station,	15 00
Town of Ashby, taxes,	1 28
Automobile service by Committees,	291 58
Parkhill Mfg. Co., rent of land for Hose No. 3,	25 00
Sundry items, unclassified,	98 00
Flowers for Mayor's inauguration,	25 00

Transfers:

Election expenses account,	\$115 63
Street maintenance, @ Fourth of July,	5 00
Burbank Hospital maintenance,	7,000 00
Police Department,	3,200 00
	—————
	\$10,320 63
	—————
	\$24,860 85
Credit balance carried to incidentals recapitulation,	2,587 96
	—————
	\$27,448 81

INCIDENTALS—RECAPITULATION.

CREDIT BALANCES.

Balance forward from General

Incidental Account,	\$2,587 96
Excess of Corporation and Bank tax,	14,033 35
Liquor licenses,	10,143 00
Water rates,	3,663 70
Interest on Temporary loans,	6,251 69
Taxes abated, balance of overlayings,	5,779 84
Support of Poor,	2,206 28
Street watering and oiling,	362 96
Dwelling house, West Fitchburg; rent,	70 62
Tax Collector's fees,	96 15
Assessors' clerical,	89 20
Sidewalk maintenance,	60 56
Assessors' incidentals,	15 29
City Treasurer, incidentals,	42 44
Pay Roll tailings,	191 98
Sales from real estate,	92 01
Sealer of Weights and Measures,	7 92
Public Library,	1 36
	—————
	\$45,696 31

DEBIT BALANCES.

School incidentals and books,	\$3,196 08
School Teacher's salaries,	1,664 87
Fire Department,	2,958 93
Printing,	346 61
Salaries,	1,932 53
Repair and care,	5,099 40
Gypsy Moth extermination,	472 84
Interest on General Debt,	1,514 05
Assessors' plans,	500 00
Retaining wall, Laurel street,	563 81
Street lighting,	371 75
Soldiers' relief,	179 70
Street maintenance,	1,592 03
Public Parks,	8,597 33
House offal,	25 86
Military aid,	292 00
City Auditor, incidentals,	9 41
City Clerk, incidentals,	65 75
Macadam maintenance,	2,945 55
Paving maintenance,	2,306 93
Sewer maintenance,	1,891 85
Board of Health,	2,702 11
Diphtheria epidemic,	3,090 10
Police Department,	450 87
Engineering,	277 76
	—————
	\$43,048 12
Net credit balance carried forward to 1912,	2,648 19
	—————
	\$45,696 31

TAXES ASSESSED FOR 1911.

For regular running expenses,	\$412,068 38
State tax,	43,835 00
State highway tax,	206 00
County tax,	28,313 00
Interest, general funded debt,	36,838 50
Interest, temporary loans,	9,000 00
Interest, water debt,	20,825 00

Sinking funds:

Water loan,	\$16,000 00
General debt,	2,500 00
School loan,	4,500 00
Sewer loan,	1,500 00
State Normal school loan,	800 00
Depot street bridge loan,	2,000 00
Fire Department loan,	1,344 50
Grade crossing loan,	3,000 00
Lowe Playgrounds,	300 00
Oak Hill bridge loan,	700 00
Paving loan,	7,125 00
Sewer loan,	5,145 00
Sidewalk loan,	8,725 00
Street construction loan,	31,800 00
Water loan,	5,000 00
School house loan,	16,400 00
Public parks loan,	300 00
Municipal loan of 1909,	11,000 00
Municipal loan of 1910,	4,000 00
Sewer assessments apportioned,	1,635 95
Interest on same,	492 41
Sidewalk assessments apportioned,	852 49
Interest on same,	83 21
Street betterment assessments apportioned,	11 54
Interest on same,	4 46
Street watering assessments,	7,958 77
Gypsy Moth assessments,	1,840 14
Overlayings for 1911,	5,186 65
Non-resident Bank tax,	5,656 21
Assessors' Warrant No. 1, additions,	270 40

	\$692,217 61

RECEIPTS.

Cash receipts by City Treasurer, \$484 710 13
 Transfers :

Estimated Corporation and Bank tax,	30,000 00
Estimated water receipts,	25,000 00

From liquor licenses,	\$20,000 00
From taxes abated,	1,165 17
	—————
	\$560,875 30
Balance uncollected for 1911, carried forward to 1912,	131,342 31
	—————
	\$692,217 61

**TEMPORARY LOANS PAID DURING THE YEAR
1911.**

Itemized in report of the City Treasurer,	\$549,500 00
---	--------------

GENERAL MUNICIPAL LOAN OF 1911, AUTHORIZED.

COVERING THE FOLLOWING PERMANENT IMPROVEMENTS:

Street construction,	\$15,155 60
Sidewalk construction,	13,145 40
Sewer construction,	9,163 32
Paving construction,	14,802 84
Macadam construction,	4,854 36
Public Playgrounds,	8,099 70
Rollstone street Grade Crossing,	9,154 58
Bemis road Bridge (railroad) alterations,	3,094 37
Fifth street Bridge, (first loan)	5,731 34
Widening Tin Bridge,	1,798 49
State Normal School Playgrounds,	5,000 00
	—————
	\$90,000 00

WATER LOAN OF 1911, AUTHORIZED.

COVERING THE FOLLOWING ACCOUNTS:

Wachusett Lake land account,	\$9,214 60
Meeting House Pond land account,	785 40
	—————
	\$10,000 00

**SPECIAL SEWAGE LOAN, ACT OF 1901,
AUTHORIZED.**

Covering expenses of construction of Trunk Sewer begun in December, 1910,	\$100,000 00
--	--------------

LEDGER BALANCES.

CREDIT.

City of Fitchburg, balance account, \$1,986,827 08

Trust Funds :

E. M. Boutelle-Robinson fund,	1,126 25
E. G. Poole fund,	4,932 38
Ellen E. Armes fund,	500 00
Nathan Whitcomb fund,	7,948 06
Cemetery lots, endowed,	36,365 00
Cemetery lots, endowed, revenue and expense account,	2,671 93

Loans :

General Debt,	200,000 00
School house,	308,950 00
Street construction,	110,200 00
Paving construction,	24,675 00
Sidewalk construction,	13,575 00
Sewer construction,	52,855 00
Public parks,	2,400 00
Grade crossings,	6,000 00
Fire Department,	2,822 50
State Normal school,	25,000 00
Oak Hill Road Bridge,	2,100 00
Depot Street Bridge,	11,500 00
Municipal loan of 1909, general	86,000 00
Municipal loan of 1909, water	23,000 00
Municipal loan of 1910, general,	33,500 00
Municipal loan of 1910, water,	16,000 00
Water loan, old	435,000 00
Bills payable, temporary loans,	335,000 00
Grade crossing bridge floors,	2,742 14
Grade crossing, Putnam, Water and Laurel streets,	522 82
Interest on water bonds, balance,	545 70
Interest on temporary loans, balance,	2,972 14
Wachusett Lake land account,	2,006 97
Copying old records,	432 90
Taxes of 1905,	10 71
Depot Street Bridge, loan balance, old	23 00

Public burial grounds,	\$81 71
Improved sewer system,	15,439 10
Water construction loan, old balance,	178 05
State Normal School playgrounds,	4,072 99
	\$3,757,976 43
Incidental credit balance carried forward to 1912,	2,648 19
	\$3,760,624 62

LEDGER BALANCES.

DEBIT.

Assessors' Appraisal, city property:

Real estate,	\$3,188,325 79
Personal estate,	348,950 64
Commonwealth of Massachusetts,	3,176 21
Sewer assessments,	6,015 56
Sewer assessments apportioned,	7,030 36
Sidewalk assessments,	4,873 57
Sidewalk assessments apportioned,	624 85
Street betterment assessments,	2,111 23
Street betterment assessments apportioned,	71 12
Debts receivable,	7,296 55
Water rates, balance uncollected,	7,928 04
Service pipe, balance uncollected,	3,683 90
Rollstone Street Grade Crossing, assessment by state,	4,752 52
Widening Tin Bridge,	682 57
Uncollected taxes:	
For 1911,	131,342 31
1910,	5,619 71
1909,	2,147 57
1908,	1,761 42
1907,	87 14
1906,	15 97

City Treasurer, cash on hand November 30, 1911,

34,127 59

\$3,760,624 62

DEBT STATEMENT.

FUNDED WATER DEBT.

Registered bonds, 3½ per cent, due April 1, 1922,	\$300,000 00
Registered bonds, 3½ per cent, due December 1, 1922,	12,000 00
Registered bonds, 3½ per cent, due July 1, 1923,	10,000 00
Registered bonds, 3½ per cent, due July 1, 1926,	45,000 00
Registered bonds, 4 per cent, due Oct. 1, 1912-1937,	68,000 00
Registered bonds, 4 per cent, due Nov. 1, 1912-1929,	18,000 00
Registered bonds, 4 per cent, due Nov. 1, 1930-1939,	5,000 00
Registered bonds, 4 per cent, due Nov. 1, 1912-1914,	3,000 00
Registered bonds, 4 per cent, due Nov. 1, 1915-1940,	13,000 00
Temporary loan of 1911,	10,000 00
	<hr/>
	\$484,000 00
Less Water Loan Sinking fund,	87,702 89
<hr/>	<hr/>
Net Water debt, Nov. 30, 1911,	\$396,297 11
Net Water debt, Nov. 30, 1910,	411,181 64
<hr/>	<hr/>
Decrease in Funded Water debt for 1911,	\$14,884 53

FUNDED GENERAL DEBT.

General Debt,	\$200,000 00
School Department,	308,950 00
Fire Department,	2,822 50
Paving Department,	24,675 00
Grade Crossing,	6,000 00
Oak Hill Road Bridge,	2,100 00
Depot Street Bridge,	11,500 00
Sewer Department,	52,855 00
Sidewalk Department,	13,575 00

State Normal School,	\$25,000 00
Public Parks,	900 00
Lowe Playground,	1,500 00
Street Construction,	110,200 00
Municipal Loan of 1909,	86,000 00
Municipal Loan of 1910,	33,500 00
Temporary Loan @ General Debt for 1911,	90,000 00
Temporary Loan @ Sewage Debt for 1911, Act of 1901,	100,000 00
<hr/>	
Total General Debt Nov. 30, 1911,	\$1,069,577 50
Less General Debt Sinking Fund,	359,710 31
<hr/>	
Net General Debt, Nov. 30, 1911,	\$709,867 19
Net General Debt, Nov. 30, 1910,	627,959 80
<hr/>	
Total increase in Net General Debt for 1911,	\$81,907 39

**VALUATION AND BORROWING CAPACITY,
NOVEMBER 30, 1911.**

Valuation May 1, 1909,	\$28,584,435 90
Valuation May 1, 1910,	30,260,357 00
Valuation April 1, 1911,	32,078,117 00
<hr/>	
Average valuation for three years, \$30,290,969 97	
2½ per cent of above average valuation,	\$757,274 25
Total Funded Debt, November 30, 1911,	\$1,553,577 50
Special Loans exempt:	
Water,	\$484,000 00
School,	250,000 00
Sewage,	100,000 00

Sinking Funds :

General,	\$185,472 05
Sewer,	34,183 59
Normal School,	19,908 06
Total to be deducted,	\$1,073,563 70
	\$480,013 80

Borrowing capacity of the city, Dec. 1, 1911,	\$277,260 45
Borrowing capacity of the city, Dec. 1, 1910,	229,305 69

ASSETS AND LIABILITIES

NOVEMBER 30th, 1911.

ASSETS.

Property owned by the City, as per

Assessors' statistics,	\$3,537,276 43
------------------------	----------------

Uncollected Taxes :

For 1911,	\$131,342 31
1910,	5,619 71
1909,	2,147 57
1908,	1,761 42
1907,	87 14
1906,	15 97
	\$140,974 12

Uncollected sewer assessments,	6,015 56
--------------------------------	----------

Uncollected sewer assessments

apportioned,	7,030 36
--------------	----------

Uncollected sidewalk assessments,	4,873 57
-----------------------------------	----------

Uncollected sidewalk assessments apportioned,	624 85
--	--------

Uncollected street betterment assessments,	2,111 23
---	----------

Uncollected street betterment assessments apportioned,	71 12
---	-------

Uncollected water bills,	7,928 04
--------------------------	----------

Uncollected service pipe bills,	3,683 90
---------------------------------	----------

Uncollected debts receivable,	7,296 55
-------------------------------	----------

Due from Commonwealth of Mass.,	3,176 21
---------------------------------	----------

Available Cash Balances :

Treasurer's cash	
balance,	\$34,127 59
Incidental account,	2,648 19
Temporary interest	
account,	2,972 14
Water loan interest	
account,	545 70
Water, Laurel and	
Putnam streets,	
grade crossings,	522 82
Water and Putnam	
streets, grade	
crossing, bridge	
floors,	15,439 10
Wachusett Lake land	
account, balance,	2,006 97
Water construction ac-	
count, balance,	178 05
Copying old records,	
balance,	432 90
Public burial grounds,	
balance,	81 71
Depot Street Bridge	
account, balance,	23 00
Taxes of 1905, balance,	10 71
	—————
	\$61,731 02

Sinking Funds :

General Loan,	\$185,472 05
School Loan,	120,146 61
Sewer Loan,	34,183 59
State Normal School	
Loan,	19,908 06
Water Loan,	87,702 89
	—————
	\$447,413 20

Total assets,	\$4,230,206 16
---------------	----------------

LIABILITIES.

Funded Water Debt,	\$474,000 00
Temporary Water Loan of 1911,	10,000 00
Funded General Debt:	
General Loan,	\$200,000 00
School Department	
Loan,	308,950 00
Fire Department	
Loan,	2,822 50
Paving Construction	
Loan,	24,675 00
Sewer Construction	
Loan,	52,855 00
Sidewalk Construction	
Loan,	13,575 00
Street Construction	
Loan,	110,200 00
Grade Crossing Loan,	6,000 00
Oak Hill Road Bridge	
Loan,	2,100 00
Depot Street Bridge	
Loan,	11,500 00
State Normal School	
Loan,	25,000 00
Public Park Loan,	900 00
Lowe Playground	
Loan,	1,500 00
Municipal Loan of	
1909,	86,000 00
Municipal Loan of	
1910,	33,500 00
Temporary Loan @	
General Debt,	
1911,	90,000 00
Temporary Loan @	
Sewage Debt,	
1911,	100,000 00

\$1,069,577 50

Temporary Loan account, notes payable,	\$135,000 00
Trust Funds :	
Endowed cemetery lots,	\$36,365 00
Endowed cemetery lots, Revenue and Expense account,	2,671 93
Nathan Whitcomb fund,	7,948 06
E. G. Poole fund,	4,932 38
E. M. Boutelle- Robinson fund,	1,126 25
Ellen E. Armes fund,	500 00
	—————
	\$53,543 62
Rollstone Street Grade Crossing, assessment,	4,752 52
Widening Tin Bridge account, balance,	682 57
	—————
Total liabilities,	\$1,747,556 21
Excess of assets over liabilities,	2,482,649 95
	—————
	\$4,230,206 16

PUBLIC BURIAL GROUNDS

PERPETUAL CARE OF LOTS

Laurel Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Armstrong, A. W.	\$111 13	\$5 00	\$6 00	\$108 13
Arnold, Adna T.	55 31	2 50	4 00	53 81
Ames, Henry E.	56 31	2 50	1 75	57 06
Atkinson, Mrs. Edward W.	53 31	2 50	4 75	51 06
Adamson, William.	54 31	2 50	3 75	53 06
Andrews, John.	112 50	5 00	7 50	110 00
Bailey, Goldsmith F.	110 63	5 00	13 50	102 13
Baldwin, Sarah A.	106 13	5 00	7 00	104 13
Burke, Elizabeth D.	55 25	2 50	1 75	56 00
Bardeen, Daniel N.	54 81	2 50	3 75	53 56
Blodgett, Alton.	54 31	2 50	3 75	53 06
Baldwin, E.	52 31	2 50	1 75	53 06
Barker, Charles.	53 31	2 50	1 75	54 06
Barker, Nathan D.	53 31	2 50	1 75	56 06
Battles, O. A.	109 33	5 00	3 50	110 83
Billings, Charles J.	162 69	7 50	8 50	161 69
Bullock, Brigham N.	158 00	7 50	5 50	160 00
Burnap, Samuel.	102 01	5 00	3 50	103 51
Battles, Joseph A.	406 89	20 00	9 00	417 89
Battles, Joseph A. and Elbridge	302 54	15 00	8 00	309 54
Blood, Ellen F.	50 00	2 50	2 50	50 00
Bigelow, Job S.		1 40	1 40	50 00
Bacon, Laura A.				100 00
Caldwell, Enoch.	82 72	3 75	2 00	84 47
Crehore, Mary M.	272 25	10 00	12 00	270 25
Crocker, Dea. Samuel.	108 65	5 00	2 50	111 15
Crocker, Samuel E.	263 80	10 00	4 50	269 30
Crocker, S. S. & D. P.	101 63	5 00	3 50	103 13
Choate, Jennie T. & Sarah Burgess	106 63	5 00	3 50	108 13
Carter, Alonzo O.	55 14	2 50	1 75	55 89
Corey, Jonas.	111 56	5 00	1 75	114 81
Cowdin, Susan F.	54 98	2 50	4 75	52 73
Chapman, Judith.	51 50	2 50	1 75	52 25
Carpenter, Imogene and J. R. Haskell.	54 93	2 50	2 75	54 68
Crosby, Emily J.	108 00	5 00	3 50	109 50
Caldwell, Thomas C.	105 50	5 00	3 50	107 00
Cushing, David.		1 73	1 73	50 00
Cross, Daniel.		1 00	1 00	50 00
Cobleigh, John H.		80	80	50 00
Damon, David.	111 50	5 00	3 50	113 00
Davis, Stephen C.	50 75	2 50	2 25	51 00
Dickinson, Elijah M.	107 91	5 00	3 50	109 41
Derby, Aaron.	109 79	5 00	6 25	108 54
Dole, Mrs. E. M.	52 75	2 50	3 75	51 50
Dole, John.	51 25	2 50	1 75	52 03
Damon, Ann Maria.	109 13	5 00	2 50	111 60
Davis, Mrs. Elizabeth.	50 56	2 50	2 50	50 56
Davis, Frederick H.	53 46	2 50	1 75	54 21
Davis, Hiram.	53 65	2 50	1 75	54 40
Davison, Susan E.	53 44	2 50	1 75	54 19

PUBLIC BURIAL GROUNDS—(*Continued*)

PERPETUAL CARE OF LOTS

Laurel Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Day, Jennie H.....	\$52 25	\$2 50	\$1 75	\$53 00
Dow, Sherburn S.....	51 89	2 50	1 75	52 64
Davis, Alonzo.....	103 23	5 00	2 50	105 73
Durant, S. P.....	50 00	2 50	1 87	50 53
Davis, John E.....		1 77	1 77	50 00
Emory, Daniel.....	110 88	5 00	3 00	112 88
Emory, Charles A.....	51 83	2 50	1 75	52 58
Farwell, Levi A. and Clara A. Woodbury.....	111 63	5 00	3 50	113 13
Farnsworth, Leonard.....	55 81	2 50	1 75	56 56
Fish, Mrs. Lydia C.....	56 81	2 50	1 75	57 56
Farnsworth, R. G.....	50 00	2 50	2 25	50 25
Forrester, Arthur.....	51 53	2 50	1 75	52 28
Fletcher, Roby.....	221 84	10 00	6 50	225 34
Farwell, Charles.....	106 89	5 00	3 50	108 39
Foster, H. Elizabeth.....	52 46	2 50	1 75	53 21
Frost, Roger P.....	51 53	2 50	1 75	52 28
Fosdick, Charles.....	50 43	2 50	1 75	51 18
Farwell, John T.....	100 00	5 00	3 73	101 27
Foster, Theodore S.....	100 00	5 00	4 43	100 57
Fox, Abel.....	50 00	2 50	2 12	50 38
Fay, George F.....		5 90	3 50	202 40
Fitts, Robert.....		2 40	2 40	100 00
Goodrich, Miss Martha.....	117 93	5 00	1 75	121 18
George, Harris B.....	53 06	2 50	3 00	52 56
Goddard, Minerva B.....	107 63	5 00	3 50	109 13
Goddard, Levina M.....	106 13	5 00	3 50	107 63
Gibson, Mrs. Samuel A.....	111 13	5 00	3 50	112 63
Goodrich, E. A.....	108 80	5 00	3 50	110 30
Garfield, J. F. D.....	103 50	5 00	6 50	102 00
Goodrich, Alonzo P.....	106 50	5 00	3 50	108 00
Goodrich, John and Mary Ann.....	52 25	2 50	3 75	51 00
Garfield, Ellery I.....	53 25	2 50	1 75	54 00
Goodrich, H. A. and W. L. Humes.....	132 53	6 25	3 50	135 28
Gibson, Sarah J.....	158 00	7 50	13 50	152 00
Garfield, Elisha.....	51 53	2 50	1 75	52 28
Gibbs, Jonathan M.....	51 25	2 50	1 75	52 00
Hale, Samuel.....	107 63	5 00	3 50	109 13
Harris, Samuel and Thomas.....	52 16	2 50	1 75	52 91
Hardy, William A.....	203 75	10 00	12 00	201 75
Hardon, James J.....	253 75	10 00	5 00	258 75
Heard, Rev. J. M.....	107 63	5 00	3 50	109 13
Haskell, Jacob.....	159 44	7 50	12 00	154 94
Huntley, Dr. O. L.....	110 58	5 00	3 00	112 58
Hildreth, George P.....	109 73	5 00	3 50	111 23
Hastings, Nancy B.....	53 75	2 50	4 75	51 50
Hayward, C. E. F.....	51 75	2 50	1 75	52 50
Hudson, William A.....	52 33	2 50	3 75	51 08
Hall, Seth B.....	54 04	2 50	3 75	52 79
Hawley, Herbert C.....	108 52	5 00	3 50	110 02
Harris, W. H.....	52 25	2 50	1 75	53 00

PUBLIC BURIAL GROUNDS—(*Continued*)

PERPETUAL CARE OF LOTS

Laural Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Hale, Amos.....	\$52 07	\$2 50	\$3 75	\$50 82
Jaquith, A. S.....	55 81	2 50	4 75	53 56
Johnson, Mary.....	117 25	5 00	1 75	120 50
Joslin, Louisa P.....	258 25	10 00	4 50	263 75
Jewett, Dr. Stephen.....	104 00	5 00	3 50	105 50
Johnson, Agnese M.....	53 94	2 50	3 75	52 69
Kendall, Lucy.....	115 38	5 00	3 00	117 38
Kinsman, John.....	55 81	2 50	5 75	52 06
Knapp, Edward.....	53 53	2 50	1 75	54 28
Kelsey, A. H.....	108 65	5 00	3 50	110 15
Lowe, Louisa J.....	108 13	5 00	6 50	106 63
Leathe, William M.....	50 00	2 50	1 75	50 75
Litch, Aaron F.....	107 68	5 00	3 50	109 18
Lowe, Arthur H.....	100 00	5 00	3 95	101 05
Litch, Charles C.....	50 00	2 50	2 29	50 21
Mack, Thomas.....	459 19	17 50	15 00	461 69
Marsh, Lizzie S.....	60 25	2 50	1 00	61 75
Messenger, Mrs. Daniel.....	55 25	2 50	1 75	56 00
Maynard, Ira B. and W. H.....	54 80	2 50	1 75	55 55
Miles, Lowell M.....	164 90	7 50	3 50	168 90
Marshall, J. Flint.....	103 00	5 00	5 50	102 50
Matthews, Ruben B.....	51 60	2 50	1 75	52 35
Norcross, Hon. Amasa.....	180 94	7 50	8 50	179 94
Newton, Charles H.....	103 72	5 00	3 50	105 22
Osborne, Ephriam.....	179 70	7 50	1 75	185 45
Ordway, A. R.....	108 50	5 00	2 50	111 00
Pierce, James.....	52 31	2 50	3 75	51 06
Pierce, Mahala.....	53 81	2 50	1 75	54 56
Piper, Mrs. S. E.....	104 50	5 00	3 50	106 00
Pratt, Silas.....	115 33	5 00	7 50	112 83
Phillips, Col. Ivers.....	167 44	7 50	4 50	170 44
Phillips, Joshua.....	57 31	2 50	1 75	58 06
Parkhurst, John and Boardman.....	235 76	10 00	20 50	225 26
Putnam, James P.....	113 63	5 00	3 50	115 13
Proctor, Maria H.....	106 13	5 00	3 50	107 63
Pratt, Barney.....	112 63	5 00	3 50	114 13
Phillips, Franklin.....	50 31	2 50	1 75	51 06
Perkins, Francis.....	110 50	5 00	2 50	113 00
Proctor, Sullivan G.....	113 50	5 00	2 50	116 00
Plaisted, Lucy J.....	51 75	2 50	2 75	51 50
Parker, Carmi M.....	215 00	10 00	7 00	218 00
Parks, Dolly S.....	104 50	5 00	5 50	104 00
Pride, Caroline H.....	212 14	10 00	5 50	216 64
Page, Ella M.....	51 50	2 50	1 75	52 25
Prentiss, Benjamin.....	51 62	2 50	1 75	52 37
Palmer, J. W.....	100 72	5 00	3 50	102 22
Peck, J. M.....	102 06	5 00	2 75	104 31
Parkhill, John.....	100 00	5 00	3 95	101 05
Pierce, Joseph.....		3 16	3 16	100 00
Page and Farrar.....		90	90	50 00

PUBLIC BURIAL GROUNDS—(*Continued*)

PERPETUAL CARE OF LOTS

Laurel Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Parshly, Benjamin G.....		\$1 04	\$1 04	\$50 00
Richardson, Mrs. Mary A.....	\$84 22	3 75	1 75	86 22
Richardson, N. Henry.....	111 63	5 00	7 50	109 13
Reed, Rhoda E.....	113 75	5 00	1 25	117 50
Rice, William.....	55 04	2 50	1 75	55 79
Rockwood, Ezra B.....	53 40	2 50	3 75	52 15
Rockwood, Mrs. G. W.....	104 50	5 00	3 50	106 00
Rogers, Wm. P. and Mrs. E. J. Lesure.....	51 25	2 50	1 75	52 00
Sherwin, L. H.....	61 87	2 50	1 00	63 37
Smith, Artemas R.....	118 12	5 00	5 75	117 37
Smith, Harrison.....	108 00	5 00	7 50	105 50
Sibley, Harrington.....	110 50	5 00	3 50	112 00
Stratton, Joseph L.....	53 50	2 50	3 75	52 25
Safford, Benjamin.....	110 38	5 00	12 00	103 38
Simonds, Alvin.....	112 63	5 00	3 50	114 13
Simonds, Abel.....	326 56	12 50	7 00	332 06
Sherwin, Levi.....	110 79	5 00	2 00	113 79
Stearns, Justin.....	106 63	5 00	3 50	108 13
Sherwin, Miranda.....	111 38	5 00	3 00	113 38
Sawyer, Albert.....	249 25	10 00	7 50	251 75
Sandin, Abbie E.....	55 76	2 50	1 75	56 51
Stannard, Mrs. J. M.....	52 25	2 50	3 75	51 00
Stearns, Willard E. and J. F. D. Garfield.....	110 33	5 00	3 50	111 83
Scott, Joseph T.....	52 84	2 50	1 75	53 59
Sheldon, Samuel D.....	52 75	2 50	3 75	51 50
Stiles, Maj. James F.....	53 25	2 50	1 75	54 00
Simonds, Clark S.....	52 25	2 50	1 75	53 00
Smith, Emma F.....	53 13	2 50	1 75	53 88
Simonds, Marietta.....	50 75	2 50	1 75	51 50
Smith, Joseph.....	302 14	15 00	8 00	309 14
Spooner, Mrs. F. E.....		2 35	1 75	50 60
Torrey, Ebenezer	241 75	10 00	5 50	246 25
Towne, Mrs. Margaret.....	165 92	7 50	5 50	167 92
Thurston, Abel.....	109 13	5 00	10 50	103 63
Tenney, C. L.....	54 46	2 50	1 75	55 21
Tolman, Martha.....	52 52	2 50	3 25	51 77
Thompson, Joseph	50 00	2 50	2 04	50 46
Upton, Thomas C.....	102 94	5 00	3 50	104 44
Whipple, Mrs. M. C.....	54 25	2 50	1 75	55 00
Wood, Lydia Hawes.....	108 88	5 00	3 00	110 88
Wallace, Hon. Rodney	321 88	15 00	12 50	324 38
Wilson, Arnold	109 00	5 00	3 50	110 50
Wheeler, John H.....	114 83	5 00	13 00	106 83
Wheeler, L. M.....	52 75	2 50	1 75	53 50
Wheeler, William J.....	112 08	5 00	2 50	114 58
White, Capt. Alfred.....	236 72	10 00	14 00	232 72
Wilson, Joseph S	103 38	5 00	3 50	104 88
Wood, Gen. Moses.....	356 38	15 00	22 00	349 38
Walker, Mary E.....	215 75	10 00	3 50	222 25
Waite, George E.....	54 25	2 50	4 75	52 00

PUBLIC BURIAL GROUNDS

PERPETUAL CARE OF LOTS.

Laurel Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Woodbury, William.....	\$52 25	\$2 50	\$1 75	\$53 00
Works, Daniel.....	107 56	5 00	3 50	109 06
Wright, John Q.....	101 00	5 00	3 50	102 50
Wood, Sylvanus and E. H.....	174 04	7 50	11 75	169 79
Whiting, Haskell L.....	107 29	5 00	3 50	108 79
Wilson, Timothy S.....	103 00	5 00	5 50	102 50
Wiswell, Walter.....	50 75	2 50	1 75	51 50
Wiswell, Isaac.....	52 75	2 50	1 75	53 50
Whitney, F. W.....	105 68	5 00	3 50	107 18
Wood, Walter.....	51 55	2 50	1 75	52 30
Wheeler, Amos.....	51 50	2 50	1 75	52 25
Wood, Samuel.....	101 85	5 00	3 50	103 35
Wheeler, H. E.....	51 50	2 50	3 25	50 75
Whitney, Elhanan.....	51 14	2 50	1 75	51 89
Wallace, David G.....	50 75	2 50	1 75	51 50
Ware, Lewis.....	50 00	2 50	2 18	50 32
Raymond, Charlotte L.....				50 00
Ball, Dr. W. D.....				50 00
	-----	-----	-----	-----
	\$20,990 31	\$978 70	\$847 51	\$22,121 50

PUBLIC BURIAL GROUNDS

PERPETUAL CARE OF LOTS

Forest Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Allen, Orel B.....	\$101 50	\$5 00	\$4 50	\$102 00
Andrews, Albert H.....	81 00	4 00	4 00	81 00
Allen, Sullivan A.....	51 81	2 50	1 75	52 56
Allen, George J.....	51 25	2 50	1 75	52 00
Armes, Lothrop.....	50 00	2 50	2 50	50 00
Adams, Henry B.....	50 75	2 50	1 75	51 50
Adams, Frank.....	51 21	2 50	2 00	51 71
Ackley, E. W. and Seymore Field.....	100 00	5 00	5 00	100 00
Adams, Samuel M. and Herbert Adams.....		2 92	2 92	100 00
Babbitt, F. O.....	52 75	2 50	2 50	52 75
Beaman, Foster E.....	109 50	5 00	3 50	111 00
Bruce, John F.....	107 63	5 00	5 50	107 13
Beer, Philip.....	54 75	2 50	2 50	54 75
Beer, George.....	105 63	5 00	5 13	105 50
Bolt, George.....	81 50	4 00	3 50	82 00
Brown, J. W. M.....	104 13	5 00	5 50	103 63
Butters, Wilder	108 25	5 00	6 75	106 50
Brown, James.....	103 59	5 00	3 50	105 09
Burnap, E. W. and Flora M. Newell.....	52 75	2 50	1 75	53 50
Blodgett, C. F.....	103 50	5 00	3 50	105 00
Brooks, Sylvanus.....	103 71	5 00	3 50	105 21
Beer, Robert.....	103 00	5 00	4 00	104 00
Brown, Charles H.....	104 49	5 00	5 50	103 99
Baker, Frank W	50 00	2 50	1 75	50 75
Burnap, Edwin S.....	101 50	5 00	3 50	103 00
Butterfield, Phoebe E.....	50 10	2 50	1 75	50 85
Butterfield, Martha A	51 17	2 50	1 75	51 92
Brown, Sarah P.....	306 29	15 00	9 00	312 29
Bird & Winchester.....	100 00	5 00	5 00	100 00
Bigelow, Amanda.....		1 40	1 40	50 00
Coggshall, Henry F.....	153 69	7 50	7 69	153 50
Colburn, Henry J.....	103 50	5 00	5 50	103 00
Corey, James.....	50 00	2 50	2 50	50 00
Crafts, Ella S.....	52 00	2 50	2 00	52 50
Cummings, M. W.....	104 08	5 00	4 50	104 58
Cate, George N	52 25	2 50	2 25	52 50
Cochran, J. V.....	51 25	2 50	1 75	52 00
Cheney, Augusta.....	51 25	2 50	1 75	52 00
Clapp, Mrs. L. B.....	50 50	2 50	1 75	51 25
Dow, Maria L.....	51 75	2 50	1 75	52 50
Dickson, H. A.....	51 75	2 50	2 50	51 75
Dongworth, Mrs. Henry.....	51 75	2 50	1 75	52 50
Downs, W. H.....	52 07	2 50	2 25	52 32
Damon, Charles H.....	100 00	5 00	4 82	100 18
Dyer, Henry B.....	200 97	10 00	9 00	201 97
Emory, Edward F.....	104 50	5 00	3 50	106 00
Emory, H. C. and Eliza M.....	102 50	5 00	4 00	103 50
Emory, Mrs. Sidney P.....	103 75	5 00	4 50	104 25
Edgerly, Joseph G	105 50	5 00	4 00	106 50
French, Mrs. Emma P.....	84 93	3 75	2 75	85 93

PUBLIC BURIAL GROUNDS—(Continued)

PERPETUAL CARE OF LOTS

Forest Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Fuller, Hubbard B.....	\$51 25	\$2 50	\$2 25	\$51 50
Ferson, Mrs. Clara A.....	54 16	2 50	2 25	54 41
Frye, Mary G.....	104 50	5 00	4 00	105 50
Farnsworth, Lorenzo B.....	51 50	2 50	2 25	51 75
Fournier, Joseph.....	51 75	2 50	1 75	52 50
Fosket, G. B.....	104 50	5 00	4 00	105 50
Farrar, Francis F.....	102 00	5 00	3 50	103 50
Farnsworth, W. A.....	158 00	7 50	5 00	160 50
Fitts, Samuel L.....	51 96	2 50	2 25	52 21
Farrar, Joseph.....	101 58	5 00	4 00	102 58
Fuller, Irving H.....	50 57	2 50	2 32	50 75
Fox, Abel A.....	50 00	2 50	2 08	50 42
Fellows, John I.....	100 00	5 00	5 00	100 00
Ferguson, Elizabeth.....		2 00	2 00	50 00
Farnsworth, J. M.....		1 12	1 12	50 00
Greenwood, Frederick A.....	161 20	7 50	5 50	163 20
Goodnow, Lyman H.....	105 63	5 00	5 13	105 50
Giles, Mrs. Martin.....	52 75	2 50	2 75	52 50
Greene, Mrs. Alexandrina.....	107 00	5 00	4 50	107 50
Grout, W. H.....	105 53	5 00	5 50	105 03
Graves, Albert H.....	104 50	5 00	4 00	105 50
Gates, Edwin C.....	53 52	2 50	2 25	53 77
Goddard, J. Myron.....	51 90	2 50	1 75	52 65
Gates, Mary L.....	50 75	2 50	2 00	51 25
George, Cidric.....	100 00	5 00	3 97	101 03
Grinnell, Jennie M.....		1 40	1 40	50 00
Hale, Henry A.....	103 50	5 00	5 00	103 50
Harris, Lizzie S.....	50 50	2 50	3 00	50 00
Holton, S. S. and Ellen Stoddard.....	106 50	5 00	5 50	106 00
Harris, Emerson W.....	103 00	5 00	4 00	104 00
Holgate, James.....	106 63	5 00	8 50	103 13
Hudson, William.....	110 92	5 00	4 75	111 17
Hartwell, Mrs. L. J.....	54 08	2 50	3 83	52 75
Hill, Charles W.....	52 44	2 50	2 75	52 19
Howorth, John.....	52 25	2 50	1 75	53 00
Harris, William F.....	102 50	5 00	4 50	103 00
Holton, Carpenter and Alvord.....	103 00	5 00	8 00	100 00
Hall, Martin S.....	50 25	2 50	1 75	51 00
Harris, Jonas.....	51 75	2 50	1 75	52 50
Holman, David F.....	102 25	5 00	4 00	103 25
Hutchinson, Grace E.....	50 61	2 50	2 86	50 25
Holman, George M.....	100 26	5 00	3 50	101 76
Hudson, Mrs. George F.....	101 20	5 00	4 50	101 70
Hidden, William G., et als	100 00	5 00	5 00	100 00
Holden, John E.....	50 00	2 50	1 75	50 75
Jaquith, Eunice W.....	105 63	5 00	4 50	106 13
Johnson, William C.....	103 50	5 00	4 00	104 50
Jones, Herman T.....	50 47	2 50	2 25	50 72
Johnson, John.....	50 00	2 50	2 03	50 47
Kellogg, Charlotte A.....	51 75	2 50	2 50	51 75

PUBLIC BURIAL GROUNDS—(*Continued*)

PERPETUAL CARE OF LOTS

Forest Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Kielty, Carrie L.....	\$51 75	\$2 50	\$1 75	\$52 50
Kinsman, John S.....	51 96	2 50	2 25	52 21
Kinsman, Frederick G.....	76 25	3 75	2 50	77 50
Kelley, Emeline.....	100 00	5 00	3 50	101 50
Kent, Edward A.....		1 65	1 65	50 00
Litchfield, S. P.....	102 50	5 00	3 50	104 00
Luke, Sarah A.....	104 63	5 00	4 13	105 50
Littlefield, Harvey.....	103 00	5 00	4 50	103 50
Lamb, Chester F. and Levi L.....	102 46	5 00	3 75	103 71
Leonard, R. A.....	100 50	5 00	3 50	102 00
Leland, C. H.....	50 00	2 50	2 36	50 14
Lawrence, Sumner P.....	100 00	5 00	4 18	100 82
Legeyt, W. W. and C. E.....		2 65	2 65	100 00
Morgan, Charles A.....	109 50	5 00	6 50	108 00
Mosher, Charles E.....	103 50	5 00	4 00	104 50
Merchant, Mary E.....	104 63	5 00	5 13	104 50
McIntire, Robert.....	103 50	5 00	4 00	104 50
Maynard, Lewis.....	51 85	2 50	2 25	52 10
Miller, Martha E. and E. J. Thompson.....	51 75	2 50	2 00	52 25
Moore, Margaret.....	102 92	5 00	4 50	103 42
Mair, Edwin.....	76 50	3 75	2 50	77 75
Munroe, Roderick.....	100 35	5 00	4 35	101 00
Marble, Sarah E.....	50 00	2 50	2 50	50 00
Metcalf, Julius A.....	50 00	2 50	2 50	50 00
Morse, Arthur S.....	50 00	2 50	1 91	50 59
Nourse, Joseph E.....	104 50	5 00	4 00	105 50
Nottage, Mary M.....	53 42	2 50	3 17	52 75
Neal, John T.....	52 25	2 50	2 00	52 75
Nichols, Charles H.....	50 00	2 50	1 95	50 55
Neil, Robert.....	50 73	2 50	2 23	51 00
Oakman, Eugene.....	51 75	2 50	1 75	52 50
Osborne, Sarah A.....	102 50	5 00	4 00	103 50
Oakes, William H.....	100 00	5 00	4 56	100 44
Putnam, Henry O.....	574 98	25 00	25 75	574 23
Poole, Edward G.....	52 75	2 50	1 75	53 50
Pierce, Della A.....	52 56	2 50	2 31	52 75
Putnam, Mrs. F. E.....	52 25	2 50	2 75	52 00
Page, Enoch, Lot No. 216.....	85 50	4 00	3 50	86 00
Pearce, James.....	155 00	7 50	6 50	156 00
Phillips, E. C.....	53 25	2 50	2 25	53 50
Poore, C. C.....	103 63	5 00	4 50	104 13
Putnam, Harriett J.....	500 00	25 00	25 00	500 00
Parkhurst, Boardman.....	102 50	5 00	3 50	104 00
Page, Enoch, Lot No. 492.....	103 00	5 00	4 50	103 50
Phelps, James.....	51 18	2 50	1 75	51 93
Putnam, John L.....	50 00	2 50	2 27	50 23
Pierce, Ellen E.....	100 00	5 00	4 53	100 47
Patton, James.....		3 10	3 10	100 00
Peabody, Emma B.....		85	85	50 00
Peck, Albert B.....		72	72	50 00

PUBLIC BURIAL GROUNDS—(*Continued*)

PERPETUAL CARE OF LOTS

Forest Hill Cemetery

	Balance Nov. 30, 1910	Interest	Care	Balance Nov. 30, 1911
Redman, Eli.....	\$52 75	\$2 50	\$1 75	\$53 50
Robinson, Susan B	87 97	3 75	4 47	87 25
Rowley, Esther.....	105 00	5 00	3 50	106 50
Rock, Charles	51 85	2 50	2 60	51 75
Rice, Charles H.....	101 34	5 00	3 50	102 84
Rich, Edward P.....		1 20	1 20	50 00
Sheldon, Thomas C.....	104 50	5 00	4 00	105 50
Sage, Jonas	52 81	2 50	2 25	53 06
Sawyer, Caroline L.....	108 44	5 00	6 50	106 94
Smith, Charles H	103 50	5 00	4 50	104 00
Storer, John E.....	52 75	2 50	2 50	52 75
Strang, Helen and Catherine.....	51 50	2 50	3 25	50 75
Steele, James E	52 00	2 50	2 75	51 75
Stearns, John S.....	51 75	2 50	1 75	52 50
Sanderson, Mrs. T. L.....	50 00	2 50	1 75	50 75
Spaulding, Nancy J.....	51 25	2 50	2 00	51 75
Struthers, Eliza A.....	52 00	2 50	2 25	52 25
Smith, Reuben T.....	50 22	2 50	1 75	50 97
Swain, Mary A.....	50 00	2 50	2 00	50 50
Thrasher, Henry.....	165 00	7 50	5 50	167 00
Tucker, Samuel.....	52 15	2 50	2 40	52 25
Tebbetts, James H.....	106 41	5 00	5 50	105 91
Townend, H. G.....	101 21	5 00	4 50	101 71
Towne, Frank W.....	101 11	5 00	5 50	100 61
Taylor, Thomas P.....	50 00	2 50	1 75	50 75
Upton, Col. Edwin.....	217 00	10 00	10 50	216 50
Whitney, Mary Ann.....	54 25	2 50	2 25	54 50
Weston, S. Newell.....	55 75	2 50	2 50	55 75
Wood, William H.....	136 30	6 25	5 50	137 05
Worster, Charles L. and John S.....	103 50	5 00	4 00	104 50
Wilder, Charles W. and E. R.....	107 50	5 00	4 50	108 00
Wright, Isaac C.....	106 00	5 00	5 50	105 50
Wood, William.....	51 75	2 50	3 50	50 75
Woodbury William	51 50	2 50	2 25	51 75
Whipple, Mrs. Eliza	81 98	3 75	2 75	82 98
Wiggin, Agnese.....	52 75	2 50	1 75	53 50
Wallace, Edgar F	51 00	2 50	1 75	51 75
Whiting, Wm. W. and W. H.....	50 00	2 50	1 75	50 75
Williams, Lovell	100 00	5 00	4 18	100 82
Whiting, F. D	50 00	2 50	2 13	50 37
Wheeler, W. B.....	100 00	5 00	4 43	100 57
Wilson, Mrs. Thomas N.....		4 45	1 75	102 70
Walter, Elmus E.....		1 78	1 78	50 00
White, John M.....		2 40	2 40	100 00
Wood, Charles.....		1 15	1 15	50 00
Younglove, George	50 00	2 50	2 50	50 00
Cairns, Jane, estate.....				50 00
Mills, John, estate.....				50 00
	\$15,731 38	\$785 79	\$701 74	\$16,915 43

TABLE SHOWING THE NUMBER OF POLLS, REAL AND PERSONAL ESTATE OF THE CITY; TAX RATES; APPROPRIATIONS TO PAY STATE, COUNTY TAX, LOANS, AND SINKING FUNDS; APPROPRIATION ACCOUNT AND RECEIPTS; EXPENDITURES AND DWELLINGS

Year	Polls	Real Estate	Personal Estate	Total	Tax Rate	Appropriation to pay State, County Tax, Loans, Sinking Funds and Interest	Appropriation Accounts and Receipts	Expenditures	Dwellings
1890	6,526	\$11,885,080	\$3,591,126 00	\$15,476,026 00	\$16 40	\$34,660 00	\$348,159 41	\$345,842 61	3,224
1891	6,886	12,443 741	3,817,376 00	16,261,117 00	16 20	38,402 18	500,188 90	473,240 21	3,392
1892	7,471	12,971,915	4,093,630 00	17,065,455 00	16 40	45,883 10	743,463 81	678,694 41	3,412
1893	7,985	13,855,603	4,419,556 00	18,275,519 00	18 00	56,169 77	725,644 77	639,276 55	3,500
1894	7,453	12,626,535	4,203,521 00	18,829,116 00	18 10	57,288 38	627,588 38	625,477 18	3,577
1895	7,719	15,328,719	4,526,755 00	19,855,744 00	18 10	72,343 10	627,868 38	625,816 17	3,146
1896	8,389	16,220,397	4,553,462 00	20,773,589 00	19 20	88,745 11	452,715 82	448,535 60	3,566
1897	8,373	16,603,260	4,682,016 00	21,285,726 00	19 20	82,855 10	529,411 28	425,534 98	3,551
1898	8,444	17,781,463	4,683,638 00	22,455,901 00	18 60	88,100 10	460,315 54	457,440 82	3,833
1899	8,497	18,127,160	4,932,091 00	23,110,521 00	18 00	111,926 10	532,030 04	506,283 37	3,664
1900	8,748	18,430,275	5,009,617 00	23,439,982 00	18 00	112,662 10	530,045 45	511,733 37	3,745
1901	8,680	19,073,175	4,981,564 00	24,060,379 00	19 20	119,578 60	607,509 13	599,179 22	3,745
1902	8,746	19,261,275	4,929,361 00	24,190,366 00	18 00	142,714 50	792,762 86	583,147 49	4,059
1903	8,869	19,482,245	4,982,595 00	24,444,580 00	19 20	153,956 10	598,195 79	615,183 35	4,097
1904	9,043	19,669,070	5,141,834 00	24,810,904 00	19 60	157,374 51	558,273 76	577,515 09	4,153
1905	9,178	20,001,885	5,268,846 00	25,267,731 00	20 40	173,979 07	687,553 52	565,380 24	4,175
1906	9,264	20,443,800	5,350,368 00	25,794,168 00	19 60	172,633 49	546,062 84	541,063 89	4,279
1907	9,536	20,898,300	5,575,138 00	26,474,488 00	20 00	236,168 75	555,185 75	528,721 17	4,316
1908	9,713	21,553,175	5,723,237 00	27,275,412 00	19 60	253,944 30	642,338 46	630,506 41	4,323
1909	9,957	22,010,450	6,560,863 50	28,571,313 50	19 20	243,096 38	639,140 41	670,730 23	4,422
1910	10,629	22,809,075	7,313,100 00	30,122,175 00	18 80	253,711 46	497,378 35	419,622 30	4,480
1911	10,623	23,895,775	8,189,116 00	32,084,891 00	18 00	256,157 00	534,084 31	534,165 54	4,517

ASSESSORS' STATISTICS, 1911

Number of individual residents assessed on property,	3,664
Number of firms, corporations, partnerships, etc.,	891
Number of non-resident individuals assessed on property,	299
Number of non-resident firms, corporations, etc.,	112
Number of persons assessed on property,	4,966
Number of persons assessed on polls only,	8,100
Number of polls assessed, (including veterans)	10,623
Number of polls exempt, (veterans and others)	181
Number of horses assessed,	1,191
Number of cows assessed,	581
Number of other cattle,	139
Number of swine assessed,	179
Number of dwellings assessed,	4,517
Number of acres of land,	16,206
Amount of real property assessed,	\$23,895 775 00
Amount of personal property assessed,	8,189,116 00
Total amount of real and personal property,	32,084,891 00
Amount of real and personal property on which abatements have been made on valuation of 1911,	52,778 00
Value of property for assessment on \$12 limit.	32,032,113 00
Number of polls under assessment December 1, 1911, (veterans and others exempt not included),	10,552
Increase of assessable property over 1910,	\$1,962,716 00
Amount of street-watering assessment for 1911,	7,958 77
Amount of sidewalk assessment apportioned in 1911, (interest to September 1)	935 70
Amount of sewer assessments apportioned in 1911, (interest to September 1)	2,128 36
Gypsy and brown tail moth assessment,	1,840 14
Street railway (local) excise tax, Acts of 1898,	4,263 31

Street railway excise tax returned and due from Commonwealth,	\$3,053 56
Street betterment assessments,	16 00
Corporation tax returned by State,	42,490 70
Bank tax returned by State,	1,878 10
Amount possible to raise by assessment for cur- rent expenses, including polls, under the \$12 limit, for 1912;	405,891 40
Increase over 1911,	23,823 02

PROPERTY OWNED BY THE CITY AS APPRAISED
NOVEMBER 30TH, 1911

	Real	Personal	Total
Burbank Hospital.....	\$211,000 00	\$26,512 00	\$237,512 00
Charles Street Lots.....	150 00		150 00
City Farm.....	39,900 00	8,001 87	47,901 87
City Hall.....	90,000 00	21,314 00	111,314 00
City Clocks and Bells.....		1,000 00	1,000 00
Fire Department.....	81,105 00	66,066 85	147,171 85
Highway Department.....	15,150 00	17,925 62	33,075 62
Maria Whitcomb House	5,600 00		5,600 00
Crown Street Lot.....	50 00		50 00
Nutting Street, Spring Lot.....	100 00		100 00
Nichols Street Lot.....	500 00		500 00
Park System.....	217,450 00	4,976 10	222,426 10
Police Department.....	44,200 00	12,821 20	57,021 20
Public Burial Grounds	7,975 00	500 00	8,475 00
E. G. Poole property.....	12,100 00		12,100 00
Raymond Lots, Ashby West road.....	360 00		360 00
School Department.....	712,105 00	41,148 00	753,253 00
Sewer System.....	416,000 00		416,000 00
Street Lighting Property.....		500 00	500 00
Taylor Farm and Isolation Hospital.....	3,900 00	669 62	4,569 62
Trust Fund (Jonas Marshall) invested in F. R. R. Co.		1,625 00	1,625 00
Trunk Sewer, at this date	30,150 00	5,115 00	35,265 00
Wallace Public Library.....	97,200 00	79,047 32	176,247 32
Wanoosnoc Hill Lot.....	1,000 00		1,000 00
Water System	1,201,580 79	61,728 06	1,263,308 85
Rollstone Street Lot, Cor. Kimball street...	750 00		750 00
 Totals.....	 \$3,188,825 79	 \$348,950 64	 \$3,537,276 43

ORDINANCES

CITY OF FITCHBURG.

IN THE YEAR

ONE THOUSAND NINE HUNDRED AND ELEVEN.

AN ORDINANCE

AMENDING CHAPTER XI OF THE ORDINANCES OF 1906,

ESTABLISHING A FUND TO BE CALLED THE

CEMETERY LOTS ENDOWMENT FUND.

Be it ordained by the City Council of the City of Fitchburg, as follows:

Chapter XI of the Ordinances of 1906 is hereby amended by adding at the end thereof the following sections :

SECTION 2. The City Treasurer shall establish a fund called the Cemetery Lots Endowment Fund in which shall be placed all funds, money or securities received by the City for the preservation, care, embellishment or improvement of any public burial place in the City of Fitchburg, or of burial lots situated in said burial places.

SEC. 3. When from time to time the funds or money in said fund shall amount to Five Hundred Dollars, the City Treasurer shall at once invest the same in those securities in which Savings Banks are allowed by law to invest their funds.

SEC. 4. In pursuance of this policy, the Finance Committee of the City Government shall annually appropriate for this fund the sum of Five Thousand Dollars, from the amount that can be raised for running expenses, or from moneys received from liquor or other licenses, for the purpose of reimbursing this Fund for the moneys received and used for running expenses ever since the Endowment of Cemetery Lots was established by the City, amounting at this date to Thirty-Four Thousand, Five Hundred Sixty Dollars.

SEC. 5. When sufficient funds to cover this indebtedness of the City shall have been received and invested as above mentioned by the City Treasurer, then shall Section 4 of this ordinance become null and void.

IN COMMON COUNCIL, June 6, 1911.

Passed to be ordained.

WILLIAM P. ESPIE, *President.*

IN BOARD OF ALDERMEN, June 6, 1911.

Passed to be ordained.

M. FRED O'CONNELL, *Mayor.*

MAYOR'S OFFICE, June 6, 1911.

Approved.

M. FRED O'CONNELL, *Mayor.*

A true copy, attest:

WALTER A. DAVIS, *City Clerk.*

CITY OF FITCHBURG.

IN THE YEAR

ONE THOUSAND NINE HUNDRED AND ELEVEN.

AN ORDINANCE.

AN AMENDMENT TO CHAPTER 19, OF THE ORDINANCES OF
1906, PROVIDING FOR THE PENSIONING OF FIREMEN.

Be it ordained by the City Council of the City of Fitchburg, as follows:

Chapter 19 of the Ordinances of 1906 is hereby amended by adding thereto at the end thereof the following :

SECTION 19. Upon the recommendation of the Chief Engineer of the Fire Department or upon his own petition therefor, any member of the Fire Department who, by reason of permanent disability incurred while in the performance of his duty as fireman, is no longer able to perform active service as a fireman, shall be retired from the Fire Department by the City Council acting in joint convention and shall receive a pension in accordance with the provisions hereinafter named.

SEC. 20. Upon such recommendation or petition any permanent member of the Fire Department who has served faithfully in said department for not less than twenty years and who is sixty-five years of age or over or incapacitated for useful service, shall be retired as above provided and shall receive a pension in accordance with the provisions hereinafter named.

SEC. 21. The City Physician shall examine every person recommended or petitioning for a pension because of permanent disability and shall furnish to the City Council a written statement of his physical condition so far as it affects permanently his ability or capacity to perform active service as a fireman.

SEC. 22. The Chief Engineer of the Fire Department shall furnish to the City Council a written statement of the circumstances under which the disability of the applicant for pension was incurred and the source of his information.

SEC. 23. The amount of the pension so granted shall be one-half of the salary received at the time of the retirement of the applicant ; provided, however, that a call fireman or a substitute call fireman shall receive an amount equal to one-half of the salary received by a permanent fireman of the same rating ; and provided, further that the pension granted to Assistant Chief Engineers or District Chief Engineers shall be one-half of an amount equal to four-fifths of the salary of the Chief Engineer.

SEC. 24. Such pensions shall be paid monthly and shall be paid out of the appropriation for the Fire Department.

SEC. 25. Any officer or member of the Fire Department so retired and pensioned who accepts or assumes the duties of an officer or member in any other Fire Department under pay, shall forfeit all rights and claims to said pension from the day he accepts or assumes such office or membership.

IN COMMON COUNCIL, Dec. 26, 1911.

Passed to be ordained.

WILLIAM P. ESPIE, *President.*

IN BOARD OF ALDERMEN, Dec. 26, 1911.

Passed to be ordained.

M. FRED O'CONNELL, *Mayor.*

MAYOR'S OFFICE, Dec. 26, 1911.

Approved.

M. FRED O'CONNELL, *Mayor.*

A true copy, attest :

WALTER A. DAVIS, *City Clerk.*

CITY OF FITCHBURG.

IN THE YEAR

ONE THOUSAND NINE HUNDRED AND ELEVEN.

AN ORDINANCE

RELATING TO STREET TRAFFIC.

Be it ordained by the City Council of the City of Fitchburg, as follows:

ARTICLE I.

VEHICLES IN MOTION.

SECTION 1. A vehicle, excepting when passing a vehicle ahead, shall keep to the right and as near the right curb as possible.

SEC. 2. A vehicle meeting another vehicle shall pass on the right.

SEC. 3. A vehicle overtaking another vehicle shall, in passing, keep to the left, but it shall not leave the line on the right unless there is a clear way of at least one hundred feet in advance on the left.

SEC. 4. On a highway divided longitudinally by a parkway, reserve space for street cars, viaduct, walk, sunken way or subway structure, vehicles shall keep to the right of such division.

SEC. 5. A vehicle in turning to the right into another street shall keep as near to the right curb as possible.

SEC. 6. A vehicle in turning to the left into another street shall pass to the right of and beyond the center of the intersecting street before turning.

SEC. 7. A vehicle crossing from one side of the street to another shall do so by turning to the left, so as to head in the general direction of traffic on that side of the street.

SEC. 8. Slow moving vehicles shall keep as close as possible to the curb on the right, so as to allow faster moving vehicles free passage on the left.

SEC. 9. No person having charge of a vehicle shall allow the same to come within ten feet of any vehicle in front of him when approaching and passing over a crossing where a pedestrian is about to cross.

SEC. 10. No person shall drive, guide or have the care of two or more horses harnessed respectively to different vehicles.

SEC. 11. The driver or person having charge of any vehicle, before turning the corner of any street or turning out or starting from or stopping at the curb line of any street, shall first see that there is sufficient space free from other vehicles, so that such turn, stop or start may be safely made, and shall then give a plainly visible or audible signal.

SEC. 12. No vehicle shall stop in the business section with its left side to the curb.

SEC. 13. In no case shall a vehicle remain backed up to the curb, excepting when actually loading or unloading.

SEC. 14. Unless in an emergency or to allow another vehicle or pedestrian to cross its path, no vehicle shall stop in any public street or highway of this city, except close to the curb line.

SEC. 15. No vehicle shall stop or stand within the intersection of any street.

ARTICLE II.

SIGNALS OF VEHICLES, POLICE AND OTHER SIGNALS.

SECTION 1. Every driver of a vehicle shall, in slowing up or stopping, give a signal to those behind by raising a whip or hand vertically.

SEC. 2. In turning while in motion or in starting to turn from a standstill a signal shall be given by the driver of the vehicle about to be turned by raising a whip or hand, indicating the direction in which the turn is to be made.

SEC. 3. Before backing ample warning shall be given by voice or uplifted hand, and while backing unceasing vigilance must be exercised by the driver not to injure those behind.

SEC. 4. Drivers of motor vehicles of all kinds shall, in approaching a crossing or in rounding a corner or curve of a public street, sound their signals in such a way as to give warning to other vehicles and to pedestrians of their approach.

SEC. 5. Vehicles must stop so as not to interfere with or prevent the passage of pedestrians at crossings, and at all times drivers of vehicles must stop the same on a signal from a police officer.

ARTICLE III.

RIGHT OF WAY.

SECTION 1. Police, Fire Department, United States mail vehicles, and ambulances, funeral processions, and emergency repair wagons, shall have the right of way in any street and through any procession.

SEC. 2. A vehicle waiting at the curb shall promptly give place to a vehicle about to take on or let off passengers.

ARTICLE IV.

SPEED OF VEHICLES.

SECTION 1. No vehicle shall proceed at a rate greater than the law allows; and at no time shall a vehicle be driven with a reckless or negligent disregard of the conditions then obtaining and the rights of others.

SEC. 2. No person having charge of a truck or a dray with an animal attached thereto shall drive the same at other than a moderate foot pace.

SEC. 3. On approaching a crossing or intersecting streets, also in traversing a crossing or an intersection of streets, or in going around a corner or curve in the highway, a vehicle shall not be driven at a rate of speed other than what is reasonable and proper, having regard to traffic at the time and the place and the use of the way and the safety of the public, and in no event exceeding eight miles an hour.

ARTICLE V.

STOPPING, STANDING AND TURNING.

SECTION 1. No vehicle shall stop in such a way as to obstruct any street or crossing for the purpose of taking on or setting down a passenger, or for loading or unloading freight, or for any other purpose, except in case of accident, or when directed to do so by an officer of the police department.

SEC. 2. No vehicles shall stop or stand within the intersection of any street, nor within ten feet of a street corner.

SEC. 3. A person having charge of a vehicle shall not stop the same abreast of another vehicle lengthwise of a street in any public street except in case of an accident or emergency.

SEC. 4. No person having charge of a vehicle shall place the same in any public street so as to prevent or obstruct the passing of other vehicles or surface cars, unless for a reasonable time not exceeding five minutes.

SEC. 5. When a horse drawn vehicle is backed up to the curb the horse or horses shall be turned so as to stand parallel with the sidewalk and headed in the general direction of travel for the side of the street on which the vehicle is standing.

SEC. 6. No person having charge of a vehicle in a public street shall refuse or neglect to stop the same or place the same as directed by a police officer, any of these rules to the contrary notwithstanding.

SEC. 7. No vehicle incapable of being turned within its own length and without backing shall be turned about in any of the streets bounded by and including the following streets:— Main street, Oliver street, Elm street, Academy street, from Main to Elm street; Prichard street, Main to Adams; Blossom street from Main street to Cumings Theatre; Day street from Main street to Union street; Snow street from Main street to Union street; North street from Main to Green street; Willow street from Main to Morris street; Myrtle avenue from Main street to Green street; Lunenburg street from Moran square to Congress street; Summer street from Moran square to Winter street; Water street from Main to Birch street; Laurel street from Water to Charles street; Forest street from Laurel to

Charles street ; Fox street from Main to Prichard street ; Hartwell street from Main street to Prichard street ; Wallace avenue from Main to Prichard street ; Grove street ; Central street ; Fairmount street from Oak Hill road to Daniels street ; Oak Hill road from River street to Fairmount street ; Daniels street ; River street from Norwood street to Sanborn street.

ARTICLE VI.

RECEIVING AND DELIVERING PASSENGERS OR MERCHANDISE.

SECTION 1. Passenger vehicles, private or public, shall not stop at any of the following named streets between the hours of 9 A. M. and 9 P. M. for more than five minutes at a time: Main street, Grove to Snow street.

SEC. 2. For the purpose of awaiting their passengers drivers of vehicles may stop and stand the same in a single line close to the curb on side streets whenever possible and only on main thoroughfares when absolutely necessary.

ARTICLE VII.

CARE IN DRIVING ; CONDITION AND TREATMENT OF HORSES ; STEALING RIDES.

SECTION 1. No person shall drive or conduct any vehicle in such condition or so loaded as to be likely to cause delay in traffic or accident or injury to man, beast or property.

SEC. 2. No person shall drive or convey through any public street any vehicle the width of which, with its load, exceed ten feet, except in accordance with a permit from the Police Department.

SEC. 3. No person shall carry, or cause to be carried, on any vehicle in any public street, a load the weight of which exceeds six tons, unless such load consists of an article which cannot be divided, except in accordance with a permit from the Police Department.

SEC. 4. No one shall drive a horse not in every respect fit for use and capable for the work on which it is employed and free from lameness and sores and vices or disease likely to

cause delay in traffic or accident or injury to persons or property.

SEC. 5. No one shall ill-treat, overload, overdrive or cruelly or unnecessarily beat any horse.

SEC. 6. No one shall crack or so use a whip as to annoy, interfere with or endanger any person or excite any horse other than that which he is using.

SEC. 7. No one shall steal a ride upon any vehicle or street car, and no one shall ride upon the rear of any vehicle without the consent of the person in charge thereof.

ARTICLE VIII.

DEFINITIONS.

SECTION 1. The word "vehicle" includes equestrians, horses hitched to vehicles of all kinds and everything on wheels and runners except street cars.

SEC. 2. The word "horse" includes all domestic animals.

SEC. 3. The word "driver" includes the rider or driver of a horse, the rider of wheels and the operator of a motor vehicle or street car.

ARTICLE IX.

PENALTIES.

SECTION 1. Whoever violates any of the provisions of the foregoing rules and regulations shall be punished by a fine not exceeding twenty dollars for each offense.

SEC. 2. Copies of these rules may be obtained at the office of the City Clerk or Chief of Police.

SEC. 3. Complaints against any person violating any of the foregoing rules and regulations, and against drivers of cabs

and other licensed and numbered vehicles, should be made at Police Headquarters or to any Police Officer.

IN COMMON COUNCIL, December 12, 1911.

Passed to be ordained.

WILLIAM P. ESPIE, *President.*

IN BOARD OF ALDERMEN, December 26, 1911.

Passed to be ordained.

M. FRED O'CONNELL, *Mayor.*

MAYOR'S OFFICE, December 26, 1911.

Approved.

M. FRED O'CONNELL, *Mayor.*

A true copy. Attest:

WALTER A. DAVIS, *City Clerk.*

CITY OF FITCHBURG.

IN THE YEAR ONE THOUSAND NINE HUNDRED AND ELEVEN.

AN ORDINANCE.

AN AMENDMENT TO CHAPTER 28 OF THE ORDINANCES OF
1906 RELATING TO PLUMBING.

Be it ordained by the City Council of the City of Fitchburg, as follows :

Chapter 28 of the Ordinances of 1906 is hereby amended by striking out Sections 1 to 25 thereof, inclusive, and substituting therefor the following:

SECTION 1. *Plans and Specifications.*—On all work hereafter to be constructed no pipes, tanks, faucets, valves and other fixtures by and through which waste water or sewage is used and carried shall be placed in any building, whether public or private, except in accordance with plans and specifications previously submitted to the Board of Health and approved by it. Such plans shall be on blanks in such forms as the Board of Health may provide and shall be placed on file in the office of said Board.

Plans and Specifications so submitted shall be approved or rejected as soon as possible and at the latest within forty-eight (48) hours after the filing thereof, and no plumbing shall be done, except to repair leaks, without a permit first being issued therefor by said Board.

After a plan or a piece of work has been approved no alterations of either shall be made except on written application of the owner or his agent duly presented to the Board of Health and approved by it.

When a plan is not practicable, a written detailed explanation of the work intended shall accompany the application.

SEC. 2. *Workmanship and Materials.*—All work shall be done in a thorough and workmanlike manner and all material shall be of good quality and free from defects.

SEC. 3. *Cellar Drain.*—When a building is constructed on wet soil, there shall be laid a suitable blind drain, and where such drain connects with a sewer or cesspool, it shall be provided with a running trap and sewer valve.

SEC. 4. *Sewer Connections.*—Every building having waste water or sewage discharge shall be separately and independently connected with the public sewer. The drainage of one house shall not be connected with another unless it is impossible to have separate connections.

SEC. 5. *Soil and Waste Pipes.*—All soil and waste pipes placed under ground within any building, and to the distance of not less than ten feet outward from the inner face of the cellar wall, shall be of cast iron, laid with a fall of not less than $\frac{1}{4}$ inch to the foot. All soil, waste or vent pipes shall be of extra heavy cast iron, steel, lead or brass.

SEC. 6.—Wrought iron or steel pipes shall not be lighter than "standard" nor less than $1\frac{1}{2}$ inches in diameter. Brass pipes shall not be less than "standard iron sizes." The fittings of all pipes shall correspond in weights with the pipes with which they connect. The wrought iron or steel pipes shall be galvanized, all lead, waste and vent pipes used in plumbing shall be not less than the weight of the corresponding sizes as specified below.

$1\frac{1}{4}$	inch,	$2\frac{1}{2}$	lbs. per foot
$1\frac{1}{2}$	"	3	" "
2	"	5	" "
3	"	6	" "
4	"	8	" "

SEC. 7. *Joints in Pipes.*—(a). The joints in cast iron pipes must be packed with oakum run full with molten lead, thoroughly caulked and made tight. Connections of lead and cast iron, shall be made with heavy brass ferrules properly wiped to the lead. Union ground joint brass ferrules may be used.

(b). Connections of wrought iron with cast iron must be lead-caulked or screw joints.

(c). Connections of lead with wrought iron to be by screw nipple.

(d). Connections of brass with brass, wrought iron or steel shall be made by thread joint and with cast iron by thread or caulked lead joints.

(e). Fittings for threaded steel or iron pipes used for waste or sewage shall be recessed.

(f). All pipes receiving the discharge from water closets shall have at least 4 inches inside diameter, and shall extend at least 2' 0" above the roof, and not less than 2' 0" above the top of any window within fifteen feet and when there are nine closets and not more than 16, the soil pipe shall be five inches in diameter and shall be proportionately increased according to the number of fixtures.

(g). Changes in direction of piping shall be made with curves, and all connections with horizontal pipes shall be made with proper Y branches, maintaining an angle of 45 degrees, or such other fitting as will preserve the same relative proportion. This section shall not apply to air pipes where suitable T branches may be used.

SEC. 8. *Hangers.*—Wrought iron hangers, (double hangers) $\frac{1}{2}$ " in diameter will be required for five and six inch pipe, $\frac{3}{8}$ " for three inch and four inch pipe, and $\frac{1}{4}$ " for two inch pipe. Hangers, clamps or suitable brick or cement piers shall be placed at intervals not exceeding six feet.

SEC. 9. *Lead Wastes.*—Lead waste pipes shall not exceed six feet in length. Waste pipes of over six feet in length shall be of iron or brass. All connections of lead supplies, waste vent or flush pipes, shall be made by means of wiped joints.

SEC. 10. *Rain Water Leaders.*—Rain water leaders shall be suitably trapped and when within a building shall be of a size not less than the pipe which conducts the water from the roof. When two or more are connected together the diameter shall be correspondingly increased; leaders shall be connected with the main drain at the entrance of said drain to the building in front of house connection. Rain water leaders shall be constructed of soil pipe, steel or wrought iron. The joint between the leader

and the roof must be air tight. Slip joints may be used inside of any building. One sq. in. of leader opening to 240 sq. ft. of roof surface.

SEC. 11. *Location of Pipes.*—All drain, soil and waste pipes shall be exposed to sight where practicable, or if necessary placed within partition walls, shall be covered with woodwork, so fastened with brass screws as to be readily removed.

SEC. 12. *Cleanouts.*—The cleanout near cellar wall shall be in as near a direct line as possible with the sewer connection.

Every right angle turn in the drain, soil or waste pipes shall be provided with accessible cleanouts.

When cleanouts are used, the screw cap shall be of brass, extra heavy, and not less than one-eighth of an inch thick. The engaging parts shall have not less than six threads of iron pipe size and shall be tapered. Cleanouts shall be full size of trap up to four inches in diameter, and not less than four inches for larger traps. The screw cap shall have a solid square or hexagonal nut, not less than one-half inch high, with a least diameter of one and one-half inches.

Traps used hereafter shall be provided with accessible cleanouts. All fixture trap screws shall be sealed with water.

SEC. 13. *House Trap and Fresh Air Inlet.*—There shall be a house trap on every drain at a point where it enters the building or immediately before, which shall be furnished with brass cleanouts. There must also be provided an inlet for fresh air at least four inches in diameter to enter the drain on the house side of the trap. This inlet is to be carried to the outer air, opening at a suitable distance from the nearest window and where it cannot contaminate the cold air box of the furnace.

SEC. 14. Traps shall be protected from syphonage or air pressure by special iron or brass pipes of a size not less than that of the waste pipes they serve; back air pipes shall not be connected to the trap or branch into the waste pipe except where a continuous vent is not practicable. Back air pipes shall enter the waste pipe within eighteen (18) inches from the trap and shall be a continuation of the waste pipe. Lead air pipe may be used only for short connections where they are exposed to view.

Air pipes for water closet traps shall be connected to the highest point of the bend, and may be of two inch bore if not for more than four floors and less than thirty feet in length; if for more than for four floors or more than thirty feet in length they shall be of three inch bore. Where a battery of water closets, basins or sinks are installed a continuous vent may be used. Two or more air pipes may be connected together or with a vent pipe; but in every such case the connection shall be above the top of the fixture. The trap for the upper fixture on a line of soil or waste pipe if within five feet of the stack in a horizontal line shall not require a special air pipe, unless the outlet is branched into the stack more than eighteen inches below the top of the water line of the trap. Round traps shall be not less than four inches in diameter and eight inches long and made of eight pound lead. All traps shall have a water seal of at least two inches.

SEC. 15. *Wastes from Sinks, Bowls, Bath Tubes, Etc.*— When two and not more than six fixtures, such as sinks, bowls, baths or wash trays are used on one line, the waste pipe must be not less than two incher in diameter, for any number on any one line exceeding six, and not more than 24, the waste pipe shall have a diameter of not less than three inches. No pipe less than one and one-fourth inches in diameter shall be used for waste, vent or flush pipe.

SEC. 16. *Refrigerator Waste.*— Waste pipes from refrigerators or other receptacles in which provisions are stored shall not be connected with the drain, soil or other waste pipes unless such waste pipes are provided with suitable ventilated traps and in every case there shall be an open tray or sink between the trap and the refrigerator.

SEC. 17. *Water Closets in Public Buildings and Tenements.*— In all houses and blocks on all streets where there is a sewer there shall be a separate water closet for each tenement or store and at least one water closet for every fifteen persons, living or employed therein, conveniently located and constantly supplied with water.

SEC. 18. *Water Closets, (how flushed).*— Every water closet or line of water closets hereafter installed shall be supplied

with water from a tank or cistern and shall have a flushing pipe of not less than one and one-quarter inch in diameter.

When "flushing valves" placed near the water closets are used, a single tank, located either in the same room with the closet or in any store above the same, may be used, and may serve more than one closet through a single main or individual pipe, provided the flush pipes be not less than one and one-quarter inch in diameter, and the tank shall have not less than two cubic feet capacity for each closet. The "flushing valves" may be of any approved pattern.

SEC. 19. *Ventilation of Water Closet Apartments, Etc.*—All water closets hereafter constructed, shall be located in a well ventilated apartment, with an adjustable window of not less than three square feet leading directly to the open air. When otherwise located, the apartment shall be supplied with a ventilating shaft having a sectional area the same as the window.

Every water closet as far as practicable, shall be provided with a separate local vent, the material of which shall be copper, galvanized or cast iron, and its diameter shall not be less than two inches. It shall be carried upward and into a heated flue, if one is provided for the purpose, and if there is not a heated flue it shall be entered into a kitchen chimney above the highest opening in said chimney. But when several closets are set close together in the same apartment, the local vents may be connected together before entering flue of chimney. The diameter for one closet shall be not less than two inches, for two and not more than four closets, three inches, and for any number exceeding four closets a proportionately increased diameter, local vents to be 16 ounce copper at least three feet from water closets.

The connection of this local vent where it enters the flue or chimney shall be made of Portland cement and wrought or cast iron pipe at least three feet long.

The space in and around water closets, wash basins and sinks, shall not be enclosed by woodwork, but shall remain open and exposed to view.

SEC. 20. *Steam Exhaust and Blow-off Pipes.*—No steam exhaust, drip or blow-off pipe shall connect with any house

drain, soil or waste pipe, unless it first discharges into a suitable tank or condenser of a capacity for low pressure work of not less than 20 gallons, and for high pressure work of not less than 40 gallons, the same to be provided with a vent, leading from its dome to the outer air of a diameter of not less than the size of the discharge pipe.

SEC. 21. *Repairs and Alterations.* — All repairs, changes or modifications in any waste pipes or drainage work now in use shall be satisfactory to the Board of Health. When any changes or alterations in the plumbing or drainage system in any building, built previous to the passage of this chapter, are to be made such changes shall be made in conformity with the provisions hereof, unless special permission to do otherwise is granted by the Board of Health.

SEC. 22. *Inspection.* — Plumbing work shall not be concealed until it has been examined and approved by the inspector of the Board of Health. The plumber or owner shall send notice to the Board of Health when the work is sufficiently advanced for such inspection and again when the work is completed.

The plumber shall test all soil, waste, drain and vent pipes in the presence of the plumbing inspector, by a pressure test, or such other tests, as the Board of Health may direct; the pressure or other tests to be applied as directed by the inspector and after all openings have been securely closed by the plumber in charge of the work. The permanent supports or hangers and clamps used to hold soil, waste, drain or vent pipes shall be in place at the time of said test. None of said pipes shall be covered until they have stood the test to the satisfaction of the inspector.

SEC. 23.—All drains now in, as well as soil and waste pipes when reconstructed shall be done in accordance with these ordinances. Wooden sinks or wash trays are prohibited unless rendered impervious to water.

When there is a main drain or common sewer in any street, highway, passway or alley, every owner of a building on land adjoining such street, highway passageway or alley shall make a sufficient drain from his house, yard or lot to such sewer, and

shall cause all waste water and sewage from sinks and water closets and other fixtures to be conducted through the same to said main drain or common sewer. No person shall suffer any waste or stagnant water to remain in any cellar or upon any lot or vacant grounds by him owned or occupied. No person or persons shall hereafter construct a privy vault within the limits of the city on any premises where there is an accessible sewer in any street or alley adjoining such lot or premises.

SEC. 24. *Stables, Garages and Laboratories.*—Drainage of stalls, stable fixtures, garages and laboratories shall be installed in accordance with plans approved by the Board of Health. Lead bends for water closets and slop sinks shall not be used to connect waste from other fixtures.

Earthenware traps shall have heavy brass floor plates soldered to the lead bends and bolted to the trap flange and the joint made gas tight with red or white lead.

Other water closet floor connections may be used subject to the approval of the Board of Health.

Every sink, wash basin, bath tub, water closet, wash tray, slop hopper and every other fixture having a waste pipe shall be placed as near as possible to the fixture it serves except that when a bath tub and wash basin or set of like fixtures not exceeding four in number are close together one trap may be used for them. The sink trap must be within one foot of the fixture and all other traps not more than three feet from the fixtures.

This ordinance shall take effect Jan. 1, 1912.

IN COMMON COUNCIL, December 12, 1911.

Passed to be ordained.

WILLIAM P. ESPIE, *President.*

IN BOARD OF ALDERMEN, December 12, 1911.

Passed to be ordained.

M. FRED O'CONNELL, *Mayor.*

MAYOR'S OFFICE, Fitchburg, Mass., December 12, 1911.

Approved.

M. FRED O'CONNELL, *Mayor.*

A true copy. Attest:

WALTER A. DAVIS, *City Clerk.*

CATALOGUE
OF THE
GOVERNMENT OF THE CITY OF FITCHBURG
IN CHRONOLOGICAL ORDER OF SERVICE
FROM ITS INSTITUTION, 1873,
TO 1912, INCLUSIVE

1873

1874

Mayor

AMASA NORCROSS

Aldermen

- Ward
 1 ELIJAH M. DICKINSON
 2 CHARLES T. CROCKER
 3 WILLIAM H. VOSE
 4 EZRA B. ROCKWOOD
 5 BENJAMIN SNOW
 6 JOHN Q. WRIGHT

Mayor

AMASA NORCROSS

Aldermen

- Ward
 1 JAMES GOODRICH
 2 EDWIN D. WORKS
 3 WILLIAM H. VOSE
 4 EZRA B. ROCKWOOD
 5 BENJAMIN SNOW
 6 FESTUS C. CURRIER

City Clerk

HENRY JACKSON

City Clerk

HENRY JACKSON

Common Council

- Ward
 1 Henry J. Colburn
 Harrington Sibley
 Franklin Lyon
 2 Cornelius Bogart
 Samuel D. Sheldon
 Daniel R. Streeter
 3 Samuel E. Crocker
 Francis Sheldon
 Leander Sprague
 4 Henry A. Willis, *Pres.*
 Thomas C. Upton
 Charles H. Brown
 5 Winchester Wyman
 James A. Ferson
 H. B. Rice
 6 Charles L. Fairbanks
 John Barnes
 Henry McGrath

Common Council

- Ward
 1 Henry J. Colburn, *Pres.*
 Charles Mason
 Henry L. Rice
 2 Cornelius Bogart
 Samuel D. Sheldon
 Daniel R. Streeter
 3 Samuel E. Crocker
 Francis Sheldon
 Leander Sprague
 4 Lyman Patch
 Thomas C. Upton
 Charles H. Brown
 5 John R. Farnum
 A. B. Sherman
 Loronzo Barker
 6 John J. Sheehan
 Edward Dwyer
 E. P. Young

Sullivan W. Huntley, *Clerk*Henry A. Hawley, *Clerk*

1875

1876

Mayor

EUGENE T. MILES

Mayor

HIRAM A. BLOOD

Aldermen

Ward

- 1 JAMES GOODRICH
- 2 EDWIN D. WORKS
- 3 LEANDER SPRAGUE
- 4 ALFRED R. ORDWAY
- 5 ANDREW B. SHERMAN
- 6 FESTUS C. CURRIER

Aldermen

Ward

- 1 JAMES GOODRICH
- 2 DANIEL R. STREETER
- 3 LEANDER SPRAGUE
- 4 GEORGE ROBBINS
- 5 ANDREW B. SHERMAN
- 6 ISAAC C. WRIGHT

City Clerk

HENRY JACKSON

City Clerk

HENRY JACKSON

Common Council

Ward

- 1 William A. Hardy
Harrington Sibley
Henry L. Rice
- 2 Cornelius Bogart
Stephen W. Dole
Daniel R. Streeter
- 3 Charles Brigham
Francis Sheldon
Gardner Farrar
- 4 Lyman Patch
Zachariah F. Young
Edward A. Brown
- 5 Eli Culley, *Pres.*
James A. Ferson
Lorenzo Barker
- 6 John J. Sheehan
John Barnes
S. W. Putnam

Common Council

Ward

- 1 Henry L. Rice, *Pres.*
E. P. Kittridge
Samuel Stevens
- 2 Cornelius Bogart
Samuel A. Wheeler, Jr.
John Phillips
- 3 Gardner Farrar
Charles Brigham
Francis Sheldon
- 4 Edward A. Brown
George D. Colony
J. R. Haskell
- 5 James A. Ferson
John Lowe
George H. Kellogg
- 6 Edward Dwyer
Edward Knapp
James B. Sargent

Henry A. Hawley, *Clerk*George E. Clifford, *Clerk*

1877

1878

Mayor

DAVID H. MERRIAM

Mayor

DAVID H. MERRIAM

Aldermen

Ward

- 1 CHARLES F. PUTNAM
- 2 HARRINGTON SIBLEY
- 3 CHARLES T. CROCKER
- 4 JOHN W. KIMBALL
- 5 ELI CULLEY
- 6 SYLVANUS SAWYER

Aldermen

Ward

- 1 CHARLES F. PUTNAM
- 2 HARRINGTON SIBLEY
- 3 FRANCIS SHELDON
- 4 GEORGE ROBBINS
- 5 ELI CULLEY
- 6 SCOTT A. WEBBER

City Clerk

HENRY JACKSON

City Clerk

HENRY JACKSON

Common Council

Ward

- 1 E. P. Kittredge
William A. Hardy
Frank A. Wood
- 2 Cornelius Bogart
William M. Pride
William Woodbury
- 3 Francis Sheldon
Samuel A. Wheeler, Jr.
Moses G. Lyon, *Pres.*
- 4 George D. Colony
Lucius Aldrich
Louis D. Bartlett
- 5 George H. Kellogg
Asa S. Lawton
Joel Joel
- 6 Edward Dwyer
Scott A. Webber
John J. Sheehan

Common Council

Ward

- 1 Benjamin D. Dwinnell
Daniel A. Chaney
James Daley
- 2 William Woodbury
William Baldwin, Jr.
John F. Bruce
- 3 Moses G. Lyon, *Pres.*
Richard A. Leonard
Alonzo Davis
- 4 Lucius Aldrich
Jonathan R. Haskell
Joseph A. Tufts
- 5 George H. Kellogg
Joel Joel
Asa S. Lawton
- 6 John J. Sheehan
John Linnehan
Patrick B. Purtill

George E. Clifford, *Clerk*George E. Clifford, *Clerk*

1879

1880

Mayor

WILLIAM H. VOSE

Mayor

ELI CULLEY

Aldermen

Ward

- 1 WILLIAM A. FOSTER
- 2 HARRINGTON SIBLEY
- 3 FRANCIS SHELDON
- 4 LUCIUS ALDRICH
- 5 ASA S. LAWTON
- 6 EDWIN A. GOODRICH

Aldermen

Ward

- 1 HENRY L. RICE
- 2 GEORGE F. FAY
- 3 ALONZO DAVIS
- 4 JAMES L. CHAPMAN
- 5 ASA S. LAWTON
- 6 SCOTT A. WEBBER

City Clerk

HENRY JACKSON

City Clerk

HENRY JACKSON

Common Council

Ward

- 1 Morgan F. Sweeney
M. W. Cummings
Nathaniel B. Sleeper
- 2 William Woodbury
William Baldwin, Jr.
John F. Bruce
- 3 Richard A. Leonard
Alonzo Davis
Henry E. Huntley
- 4 Joseph A. Tufts
Charles A. Priest
E. Foster Bailey, *Pres.*
- 5 Joel Joel
Albert N. Lowe
Edward B. Macy
- 6 Edward Dwyer
George N. Green
Michael J. Sparks

Common Council

Ward

- 1 Morgan F. Sweeney
Henry O. Putnam
Joseph T. Battles
- 2 Cornelius Bogart
John Q. Peabody
John F. Bruce
- 3 Richard A. Leonard
William F. Wallace
Francis F. Farrar
- 4 E. Foster Bailey
Edward P. Loring, *Pres.*
John Burney
- 5 Joel Joel
Edward B. Macy
George H. Wheelock
- 6 Edward Dwyer
William L. Bartlett
Peter McDonough

Thomas C. Sheldon, *Clerk*John E. Kellogg, *Clerk*

1881

1882

Mayor

ELI CULLEY

Mayor

GEORGE ROBBINS

Aldermen

Ward

- 1 SALMON W. PUTNAM
- 2 GEORGE F. FAY
- 3 ALONZO DAVIS
- 4 LUCIUS ALDRICH
- 5 ASA S. LAWTON
- 6 FESTUS C. CURRIER

Ward

- 1 SALMON W. PUTNAM
- 2 JOHN F. BRUCE
- 3 ALONZO DAVIS
- 4 LUCIUS ALDRICH
- 5 JACOB H. FAIRBANKS
- 6 ALBERT B. LAWRENCE

City Clerk

HENRY JACKSON

City Clerk

HENRY JACKSON

Common Council

Ward

- 1 Henry O. Putnam
James B. Shannon
Alexander Cuthbertson
- 2 Cornelius Bogart
John Q. Peabody
Joseph Butler
- 3 William E. Wallace
Henry G. Morse
Charles Brigham
- 4 E. Foster Bailey
Frederick Fosdick, *Pres.*
Charles A. Priest
- 5 Henry M. Choate
Alvin O. Stickney
George H. Kellogg
- 6 John J. Sheehan
Edward Dwyer
George N. Green

Ward

- 1 William A. Hardy
James B. Shannon
Alexander Cuthbertson
- 2 John Q. Peabody
John McNamara
James Pearce
- 3 William E. Wallace
Richard Leonard
George B. Woodward
- 4 Frederick Fosdick, *Pres.*
Charles A. Priest
John Burney
- 5 Henry M. Choate
John H. Parker
Albert B. Buxton
- 6 Winchester Wyman
Horace M. Kendall
Charles Smith

John E. Kellogg, *Clerk*John E. Kellogg, *Clerk*

1883

1884

Mayor

ALONZO DAVIS

Mayor

ALONZO DAVIS

Aldermen

Ward

- 1 HENRY O. PUTNAM
- 2 GEORGE E. WAITE
- 3 WILLIAM E. WALLACE
- 4 JAMES L. CHAPMAN
- 5 JOEL JOEL
- 6 ALBERT B. LAWRENCE

Ward

- 1 HENRY O. PUTNAM
- 2 GEORGE E. WAITE
- 3 GARDNER FARRAR
- 4 JOHN BURNNEY
- 5 JOEL JOEL
- 6 HENRY G. MORSE

City Clerk

HENRY JACKSON

City Clerk

HENRY JACKSON

Common Council

Ward

- 1 George W. Luke
Alexander Cuthbertson
Bernard H. Flaherty
- 2 John Q. Peabody
Augustus H. Proctor
James Pearce
- 3 Francis Sheldon
John Parkhill
Albert B. Haskell
- 4 Charles A. Priest
John Burney, *Pres.*
William A. Macurda
- 5 Charles H. Glazier
Joseph S. Wilson
John H. Parker
- 6 Horace M. Kendall
Henry Concannon
Henry McGrath

Ward

- 1 Bernard H. Flaherty
George W. Luke
Joseph T. Battles
- 2 James Pearce
Bela W. Blood
Augustus H. Proctor
- 3 John Parkhill
John H. Daniels
Uriah E. Cleveland
- 4 George H. Spencer, *Pres.*
William A. Macurda
Carmi M. Parker
- 5 John H. Parker
Charles H. Glazier
Merritt A. Holton
- 6 Horace M. Kendall
Henry McGrath
Henry Concannon

John E. Kellogg, *Clerk*John E. Kellogg, *Clerk*

1885

Mayor
ALONZO DAVIS

Aldermen

- Ward
 1 HENRY O. PUTNAM
 2 GEORGE E. WAITE
 3 GARDNER FARRAR
 4 JOHN BURNETT
 5 JOSEPH S. WILSON
 6 HENRY G. MORSE

City Clerk

HENRY JACKSON

Common Council

- Ward
 1 Patrick Donlon
 Bernard H. Flaherty
 Raymond J. Parker
 2 James Pearce
 Bela W. Blood
 Augustus H. Proctor
 3 John H. Daniels
 Uriah E. Cleveland
 Harlan P. Tyrrell
 4 Carmi M. Parker
 Geo. H. Spencer, *Pres.*
 William Edwards
 5 Henry A. Hatch
 Hiram H. Lamb
 J. Dudley Littlehale
 6 Michael J. Hogan
 Henry J. Lewis
 James H. McCarty

1886

Mayor
FREDERICK FOSDICK

Aldermen

- Ward
 1 LYMAN H. GOODNOW
 2 DAVID M. DILLON
 3 JOHN PARKHILL
 4 JAS. F. D. GARFIELD
 5 HENRY M. CHOATE
 6 HENRY G. MORSE

City Clerk

HENRY JACKSON

Common Council

- Ward
 1 Raymond J. Parker
 Patrick Donlon
 Andrew Connery
 2 George W. Weymouth
 George S. Cogswell
 George Wilmot
 3 Benjamin G. Bagley
 William H. Goodwin
 Henry F. Rockwell
 4 William Edwards
 Charles Fosdick, *Pres.*
 Willard Dennis
 5 Hiram H. Lamb
 Alvin E. Battles
 Charles P. Washburn
 6 James H. McCarty
 Henry J. Lewis
 Michael J. Hogan

John E. Kellogg, *Clerk*John E. Kellogg, *Clerk*

1887

1888

Mayor

FREDERICK FOSDICK

Mayor

ELI CULLEY

Aldermen

Ward

- 1 FRANK A. WOOD
- 2 DAVID M. DILLON
- 3 JOHN PARKHILL
- 4 JAS. F. D. GARFIELD
- 5 HENRY M. CHOATE
- 6 HORACE M. KENDALL

Aldermen

Ward

- 1 FRANK A. WOOD
- 2 EDWIN D. WORKS
- 3 WILLIAM O. BROWN
- 4 ARTHUR H. LOWE
- 5 CHAS. P. WASHBURN
- 6 HORACE M. KENDALL

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 Michael D. Crimmins
Frederick Ryan
Joseph A. Fuller
- 2 George S. Cogswell
James Hanna
Francis A. McCauliff
- 3 William H. Goodwin
Benjamin G. Bagley
H. F. Rockwell, *Pres.*
- 4 Willard Dennis
Joseph C. Moulton
William Edwards
- 5 Alvin E. Battles
Charles P. Washburn
Clarentine E. Ferson
- 6 Thomas H. Doherty
Michael Whalon
James H. McCarty

Common Council

Ward

- 1 Michael D. Crimmins
Frederick Ryan
Joseph A. Fuller
- 2 James Hanna
Daniel O'Connor
Henry J. Lacey
- 3 H. F. Rockwell, *Pres.*
George J. Pethybridge
Uriah E. Cleveland
- 4 Edward W. Ackley
Joseph C. Moulton
Will M. W. Spring
- 5 Alvin E. Battles
Clarentine E. Ferson
Frederick W. Brazier
- 6 James H. McCarty
Michael Whalon
Thomas H. Doherty

John E. Kellogg, *Clerk*John E. Kellogg, *Clerk*

1889

1890

Mayor

ELI CULLEY

Aldermen

Ward	
1	FRANK A. WOOD
2	EDWIN D. WORKS
3	HENRY F. ROCKWELL
4	DANIEL CROSS
5	CHAS. P. WASHBURN
6	HORACE M. KENDALL

City Clerk

WALTER A. DAVIS

Common Council

Ward	
1	Frederick Ryan Jeremiah Regan Martin E. Murnane
2	James Hanna Daniel O'Connor John King, Jr.
3	Samuel B. Bartow, Jr. Uriah E. Cleveland Harlan P. Tyrrell
4	Edward W. Ackley Joseph C. Moulton D. S. Woodworth, <i>Pres.</i>
5	Daniel F. Tarbell Charles H. Glazier Orin M. Lowe
6	Michael Whalon John J. Sheehan John T. Burke

Charles T. Cushing, *Clerk***Mayor**

CHARLES S. HAYDEN

Aldermen

Ward	
1	M. W. CUMMINGS
2	EDWIN D. WORKS
3	HENRY F. ROCKWELL
4	EDWARD W. ACKLEY
5	NELSON F. BOND
6	ANDREW B. PETERS

City Clerk

WALTER A. DAVIS

Common Council

Ward	
1	Michael D. Crimmins Martin E. Murnane John C. Whitney
2	George F. Comley Albert J. Eveleth John McNamara
3	Uriah E. Cleveland Charles H. Hayward Henry W. Pierson
4	Charles H. Doten Herbert G. Lowe D. S. Woodworth, <i>Pres.</i>
5	Charles H. Glazier J. Everett Luscombe Daniel F. Tarbell
6	John T. Burke John J. Sheehan Michael Whalon

David A. Hartwell, *Clerk*

1891

1892

Mayor

SAMUEL L. GRAVES

Aldermen

Ward

- 1 HENRY O. PUTNAM
- 2 ALBERT J. EVELETH
- 3 HENRY F. ROCKWELL
- 4 EDWARD W. ACKLEY
- 5 SUMNER S. LAWRENCE
- 6 MYRON B. DAMON

Mayor

SAMUEL L. GRAVES

Aldermen

Ward

- 1 HENRY THRASHER
- 2 ALBERT J. EVELETH
- 3 CHAS. H. HAYWARD
- 4 SIDNEY SIBLEY
- 5 FRED'K W. BRAZIER
- 6 EDWIN A. GOODRICH

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 George E. Ferson
Martin E. Murnane
Henry Thrasher
- 2 Frank H. Works
John McNamara
John F. Shea
- 3 William G. Farrar
Henry W. Pierson
Uriah E. Cleveland
- 4 Sidney Sibley
Charles H. Doten
Ebenezer Bailey
- 5 Fred'k W. Brazier, *Pres.*
J. Everett Luscombe
Albert H. Burgess
- 6 James F. Boyle
John F. Kane
John J. Sheehan

Common Council

Ward

- 1 John Heagney
Thomas F. Kennedy
George D. Whittemore
- 2 John J. McNamara
Joseph A. Rivers
John F. Shea
- 3 William G. Farrar, *Pres.*
Henry W. Pierson
B. Marshall Pitts
- 4 Samuel Anderson
Ebenezer Bailey
Nathan C. Upham
- 5 Henry T. Allen
Henry A. Dickson
J. Everett Luscombe
- 6 James F. Boyle
Michael J. Hogan
John F. Kane

David A. Hartwell, *Clerk*Charles K. Darling, *Clerk*

1893

1894

Mayor

ARTHUR H. LOWE

Mayor

EDGAR S. MOULTON

Aldermen

Ward

- 1 HENRY THRASHER
- 2 EDWIN D. WORKS
- 3 CHARLES F. BAKER
- 4 SIDNEY SIBLEY
- 5 FREDERICK W. BRAZIER
- 6 EDWIN A. GOODRICH

Ward

- 1 ANDREW CONNERY
- 2 EDWIN D. WORKS
- 3 CHARLES A. CROSS
- 4 SAMUEL ANDERSON
- 5 AUGUSTUS WELLINGTON
- 6 MYRON B. DAMON

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 John Heagney
Thomas F. Kennedy
George D. Whittemore
- 2 George F. Comley
Gustave C. DesRivieres
Frank H. Works
- 3 Ernest N. Cummings
George J. Pethybridge
B. Marshall Pitts
- 4 Samuel Anderson
Ebenezer Bailey
William L. Sargent
- 5 Albert H. Burgess, *Pres.*
John W. Ogden
Albert B. Peck
- 6 Charles W. Gale
Michael J. Hogan
John F. Kane

Ward

- 1 Joseph F. Jaseph
James P. Kane
John P. Kennedy
- 2 James H. Long
Joseph A. Rivers
John E. Thomas
- 3 Walter A. Hartwell
William V. Lowe
George J. Pethybridge
- 4 James A. Austin
William L. Sargent
Edwin J. Tilton
- 5 Joseph W. Abbott
Albert H. Burgess, *Pres.*
John W. Ogden
- 6 John E. Dwyer
Charles W. Gale
Michael Whalon

Charles K. Darling, *Clerk*Fred W. Keough, *Clerk*

1895

1896

Mayor

EDGAR S. MOULTON

Mayor

HENRY F. ROCKWELL

Aldermen

Ward

- 1 SALMON W. PUTNAM
- 2 BOARDMAN PARKHURST
- 3 CHARLES A. CROSS
- 4 SAMUEL ANDERSON
- 5 AUGUSTUS WELLINGTON
- 6 MYRON B. DAMON, *Pres.*

Aldermen

Ward

- 1 SALMON W. PUTNAM
- 2 BOARDMAN PARKHURST
- 3 B. MARSHALL PITTS
- 4 FREDERICK A. CURRIER
- 5 JOEL JOEL
- 6 EDGAR F. BELDING, *Pres.*

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 Joseph F. Jaseph
James P. Kane
John P. Kennedy
- 2 George F. Comley
Joseph A. Rivers
John E. Thomas
- 3 Walter A. Hartwell
William V. Lowe
George V. Upton
- 4 James A. Austin
William L. Sargent
Edwin J. Tilton
- 5 Joseph W. Abbott
Allen W. Banister
Albert H. Burgess, *Pres.*
- 6 John E. Dwyer
Charles W. Gale
Frederic L. Rolph

Common Council

Ward

- 1 John Heagney
James P. Kane
James McGee
- 2 George F. Comley
Joseph A. Rivers
John E. Thomas
- 3 Walter A. Hartwell
Charles H. Hayward
George V. Upton
- 4 Charles H. Blood, *Pres.*
Edwin J. Tilton
Arthur A. Train
- 5 Allen W. Banister
Frank C. Hoyt
William H. Keyes
- 6 James S. Devlin
LeForest Fuller
Frederic L. Rolph

John R. Oldfield, *Clerk*Francis McMurray, *Clerk*

1897

1898

Mayor

HENRY F. ROCKWELL

Mayor

HENRY F. ROCKWELL

Aldermen

Ward

- 1 CHARLES C. WALKER
- 2 JOSEPH A. RIVERS
- 3 B. MARSHALL PITTS
- 4 FRED'K A. CURRIER
- 5 JOEL JOEL
- 6 E. F. BELDING, *Pres.*

Ward

- 1 CHARLES C. WALKER
- 2 JOSEPH A. RIVERS
- 3 WILLIAM G. FARRAR
- 4 ARTHUR A. TRAIN
- 5 JOEL JOEL, *Pres.*
- 6 FRED'K F. WOODWARD

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 Charles S. Keith
James McGee
Lawrence J. Scanlon
- 2 Charles A. Babbitt
Patrick C. Donohue
Francois X. Morin
- 3 John E. Dempsey
Elijah P. Sheldon
Charles H. Vickery
- 4 Eustace L. Fiske
George H. Priest
Arthur A. Train, *Pres.*
- 5 Abner H. Brownell
Alfred R. Chilton
William H. Keyes
- 6 James S. Devlin
LeForest Fuller
A. Horace LaRue

Ward

- 1 Charles S. Keith
James McGee
Lawrence J. Scanlon
- 2 Charles A. Babbitt, *Pres.*
Patrick C. Donohue
Francois X. Morin
- 3 John E. Dempsey
Michael O'Brien, Jr.
Elijah P. Sheldon
- 4 Eustace L. Fiske
George H. Priest
J. Wilder Merriam
- 5 Abner H. Brownell
Alfred R. Chilton
Moses J. Perault
- 6 Henry E. Cowdrey
Daniel E. Sullivan
Guy Woods

Fred A. Tolman, *Clerk*Fred A. Tolman, *Clerk*

1899

1900

Mayor**SAMUEL ANDERSON****Mayor****SAMUEL ANDERSON****Aldermen**

Ward

- 1 C. C. WALKER, *Pres.*
- 2 ANDREW PRATT
- 3 GEORGE H. PRIEST
- 4 J. EDWARD PUTNAM
- 5 WILLIAM G. HIDDEN
- 6 ROBERT LAWTON

Aldermen

Ward

- 1 JOHN R. SMITH
- 2 ALEXANDER THOMSON
- 3 GEORGE H. PRIEST, *Pres.*
- 4 ARTHUR A. TRAIN
- 5 SUMNER S. LAWRENCE
- 6 ORIN M. LOWE

City Clerk**WALTER A. DAVIS****City Clerk****WALTER A. DAVIS****Common Council**

Ward

- 1 Charles S. Keith
John H. Scanlon
James B. Shannon
- 2 Patrick R. Dacey
Patrick C. Donohue
George E. Wellington
- 3 John G. Faxon
Michael O'Brien, Jr.
Halbert E. Parkhurst
- 4 Eustace L. Fiske, *Pres.*
J. Wilder Merriam
Robert N. Wallis
- 5 Abner H. Brownell
Melville E. Choate
Roy O. Littlehale
- 6 Henry E. Cowdrey
Daniel E. Sullivan
Guy Woods

Common Council

Ward

- 1 Peter F. Ward
Richard D. Leonard
Geo. D. Whittemore
- 2 Patrick R. Dacey
Louis N. M. Deschenes
George H. A. Fischer
- 3 Halbert E. Parkhurst
George S. Cogswell
John G. Faxon
- 4 Robt. N. Wallis, *Pres.*
J. Wilder Merriam
Henry R. Flanders
- 5 Abner H. Brownell
James A. Hall
Roy O. Littlehale
- 6 Daniel E. Sullivan
Chester L. Lincoln
Guy Woods

Fred A. Tolman, Clerk**Fred A. Tolman, Clerk**

1901

1902

Mayor

CHARLES A. BABBITT

Mayor

CHARLES A. BABBITT

Aldermen

Ward

- 1 JOHN R. SMITH
- 2 J. LOVELL JOHNSON
- 3 GEO. H. PRIEST, *Pres.*
- 4 GEORGE W. HOLMAN
- 5 NATHANIEL VARNEY
- 6 GUY WOODS

Aldermen

Ward

- 1 GEORGE H. JOHNSON
- 2 J. L. JOHNSON, *Pres.*
- 3 GEORGE S. COGSWELL
- 4 AUG. WELLINGTON
- 5 HENRY O. SAWYER
- 6 CHARLES B. SMITH

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 William T. Herlihy
Edward P. O'Connor
George D. Whittemore
- 2 Louis N. M. DesChenes
G. Henry A. Fischer
Charles T. McMurray
- 3 Geo. S. Cogswell, *Pres.*
Thomas A. Monahan
Halbert E. Parkhurst
- 4 Harrison Bailey
Russell Bingham
John Leiper
- 5 Charles W. Burnell
Roy O. Littlehale
Henry H. Wheelock
- 6 Napoleon J. Cadorette
Charles P. Goodrich
Daniel E. Sullivan

Common Council

Ward

- 1 Henry A. Greenwood
William T. Herlihy
Edward P. O'Connor
- 2 Louis N. M. DesChenes
Charles T. McMurray
Robert F. Wilson
- 3 Charles W. Baldwin
Frederick C. Nichols
Matthew Tait
- 4 William H. Bennett
Gardner K. Hudson
John Leiper, *Pres.*
- 5 Joseph Q. Abbott
Charles W. Burnell
Albert E. Culley
- 6 James Barr
Napoleon J. Cadorette
George W. Lord

Fred A. Tolman, *Clerk*Fred A. Tolman, *Clerk*

1903

1904

Mayor

CHARLES H. BLOOD

Mayor

HENRY O. SAWYER

Aldermen

Ward

- 1 GEORGE H. JOHNSON
- 2 J. L. JOHNSON, *Pres.*
- 3 CHARLES H. GREENE
- 4 J. WILDER MERRIAM
- 5 HENRY O. SAWYER
- 6 HENRY E. COWDREY

Aldermen

Ward

- 1 WALTER A. HARDY
- 2 ANDREW PRATT
- 3 GEORGE S. COGSWELL
- 4 J. W. MERRIAM, *Pres.*
- 5 ROY O. LITTLEHALE
- 6 HENRY E. COWDREY

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 Patrick Donlon
Henry A. Greenwood
William T. Herlihy
- 2 Louis N. M. DesChenes
Arthur LaFortune
Maurice J. O'Connor
- 3 Charles W. Baldwin
Frederic C. Nichols
Frederick W. C. Slade
- 4 Wm. H. Bennett, *Pres.*
Gardner K. Hudson
John Leiper
- 5 H. Mertoun Downs
Albert T. Hamlet
John Sreenan
- 6 Edward F. Boyle
Charles F. Cowdrey
Bernard Hennessey

Common Council

Ward

- 1 William T. Herlihy
A. Horace LaRue
John M. O'Neill
- 2 William Davidson
Arthur LaFortune
Maurice J. O'Connor
- 3 Charles W. Baldwin
Fred Newcombe
Frederick W. C. Slade
- 4 Wm. H. Bennett, *Pres.*
Gardner K. Hudson
Arthur A. Wellington
- 5 H. Mertoun Downs
Albert T. Hamlet
Fred E. Nelson
- 6 Edward F. Boyle
Charles F. Cowdrey
Paul LaFleur

Fred A. Tolman, *Clerk*Fred A. Tolman, *Clerk*

1905

1906

Mayor

HENRY O. SAWYER

Mayor

JAMES H. McMAHON

Aldermen

Ward

- 1 WALTER A. HARDY
- 2 WILLIAM DAVIDSON
- 3 GEO. S. COGSWELL, *Pres.*
- 4 WILLIAM H. BENNETT
- 5 ROBERT S. PARKS
- 6 HENRY E. COWDREY

Ward

- 1 FRED A YOUNG
- 2 LOUIS N. M. DESCHENES
- 3 CHARLES W. BALDWIN
- 4 CHARLES E. KIRBY
- 5 ARCHIE E. PERKINS
- 6 ORIN M. LOWE, *Pres.*

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 John F. McNamara
John M. O'Neill
David C. Dacey
- 2 John B. LaRiviere
David L'Ecuyer
Edward B. O'Sullivan
- 3 Chas. W. Baldwin, *Pres.*
Fred Newcombe
John Shirreffs
- 4 Milton L. Cushing
Alvah M. Levy
Arthur A. Wellington
- 5 Fred E. Nelson
N. Curtis Rublee
Albyn A. Stebbins
- 6 Fred E. Burleigh
Joseph F. Perault
Charles F. Wilson

Ward

- 1 David C. Dacey
John F. McNamara
John M. O'Neill
- 2 Fred'k C. N. Jackson
David L'Ecuyer
Edward B. O'Sullivan
- 3 Frank H. Foss
Fred Newcombe
John Shirreffs, *Pres.*
- 4 Harrah K. Bennett
Alvah M. Levy
William S. Putnam
- 5 George T. Greenwood
Fred E. Nelson
Edwin S. Spalding
- 6 Fred E. Burleigh
Joseph F. Perault
Burnside E. Sawyer

Fred A. Tolman, *Clerk*John G. Faxon, *Clerk*

1907

1908

Mayor

JAMES H. McMAHON

Aldermen

Ward

- 1 FRED A. YOUNG, *Pres.*
 2 LOUIS N. M. DESCHENES
 3 JOHN SHIRREFFS
 4 GIFFORD K. SIMONDS
 5 ARCHIE E. PERKINS
 6 ORIN M. LOWE

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 David C. Dacey
 Thomas P. A. Kelly
 John F. McDowell
 2 Frank P. Allen
 Michael Beer
 *Fred C. N. Jackson
 3 William P. Espie
 Frank H. Foss
 Henry K. Tucker
 4 Harrah K. Bennett
 Alvah M. Levy
 William S. Putnam
 5 George T. Greenwood
 Fred E. Nelson
 Edwin S. Spalding
 6 Fred E. Burleigh, *Pres.*
 Joseph H. Dufort
 Stephen P. Walsh

Mayor

JAMES H. McMAHON

Aldermen

Ward

- 1 FRANK O. HARDY
 2 L. N. M. DESCHENES, *P.*
 3 JOHN SHIRREFFS
 4 CHARLES E. KIRBY
 5 HORACE M. KENDALL
 6 FRED E. BURLEIGH

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 David C. Dacey, *Pres.*
 John B. Fellows
 John F. McDowell
 2 Frank P. Allen
 William I. Hilferty
 John Taylor
 3 William P. Espie
 Frank H. Foss
 Benjamin F. McCauliff
 4 Harrah K. Bennett
 William D. Preston
 William S. Putnam
 5 Earl H. Farwell
 Frederick M. Leathers
 Edwin S. Spalding
 6 Joseph Dufort
 James H. Sheehan
 Stephen P. Walsh

John G. Faxon, *Clerk*John G. Faxon, *Clerk*

*Resigned March 5, 1907.

Bartholomew J. Ratchford, 98 Beach street, elected April 9, 1907.

1909

1910

Mayor

M. FRED'K O'CONNELL

Mayor

M. FRED'K O'CONNELL

Aldermen

Ward

- 1 DAVID C. DACEY
- 2 L. N. M. DESCHENES, *Pres.*
- 3 FRANK H. FOSS
- 4 WILLIAM E. PRESTON
- 5 JOEL JOEL
- 6 JOHN C. SMITH

Aldermen

Ward

- 1 JOHN B. FELLOWS
- 2 FRANK P. ALLEN
- 3 FRANK H. FOSS
- 4 CHARLES E. KIRBY
- 5 JOEL JOEL, *Pres.*
- 6 JOHN C. SMITH

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 John B. Fellows
John F. McDowell
Daniel H. Mylott
- 2 Frank P. Allen
George H. Miller
John Taylor
- 3 William P. Espie
Albert E. Flight
Charles H. Watson
- 4 Warner M. Allen
Harrah K. Bennett, *Pres.*
William S. Putnam
- 5 Earl H. Farwell
Henry G. Pearson
Ernest G. Willard
- 6 Joseph Dufort
James H. Sheehan
Stephen P. Walsh

Common Council

Ward

- 1 John W. Dooling
John F. McDowell
John B. Moran
- 2 Victor Guay
David D. Maloney
George H. Miller
- 3 William P. Espie, *Pres.*
Albert E. Flight
Charles H. Watson
- 4 Warner M. Allen
Harrah K. Bennett
William C. Hardy
- 5 Joseph N. Carriere
William E. Dempsey
Henry G. Pearson
- 6 Joseph Dufort
James H. Sheehan
John J. Sweeney

John G. Faxon, *Clerk*John G. Faxon, *Clerk*

1911

1912

Mayor

M. FRED'K O'CONNELL

Mayor

FRANK O. HARDY

Aldermen

Ward

- 1 JOHN B. FELLOWS
- 2 FRANK P. ALLEN
- 3 FRANK H. FOSS
- 4 JAMES PIGGOTT
- 5 JOEL JOEL, *Pres.*
- 6 JOHN C. SMITH

Aldermen

Ward

- 1 GARDNER K. HUDSON
- 2 FRANK P. ALLEN
- 3 FRANK H. FOSS, *Pres.*
- 4 JAMES PIGGOTT
- 5 JOEL JOEL
- 6 FREDERICK W. PIERCE

City Clerk

WALTER A. DAVIS

City Clerk

WALTER A. DAVIS

Common Council

Ward

- 1 John W. Dooling
John F. McDowell
John B. Moran
- 2 Victor Guay
George H. Miller
Francis H. Taylor
- 3 William P. Espie, *Pres.*
Benj. F. McCauliff
Edward A. McIntire
- 4 Clarence M. Chandler
Percy B. Hitchcock
Forrest G. Smith
- 5 William E. Dempsey
Lyman E. Newton
Henry G. Pearson
- 6 Napoleon J. Cadorette
James H. Sheehan
John J. Sweeney

Common Council

Ward

- 1 John W. Dooling, *Pres.*
Michael F. O'Neill
Fred E. Walsh
- 2 Victor Guay
Hugo Moschner
Francis H. Taylor
- 3 Harold E. Dempsey
Benj. F. McCauliff
Edward A. McIntire
- 4 Percy B. Hitchcock
Howard C. Rudderham
Forrest G. Smith
- 5 Carl B. Joel
Lyman E. Newton
Thatcher R. Rich, Jr.
- 6 Napoleon J. Cadorette
Joseph W. Dempsey
Thomas H. Powers

Harry P. Casey, *Clerk*Harry P. Casey, *Clerk*

INDEX

	PAGE
Academy Street Ungraded School	64
Accounts, Committee on	17
Act to authorize the City of Fitchburg to establish a System of Sewage Disposal	554
Agent of the Board of Aldermen	30
Report of	515
Agent for Soldiers' Relief, Report of	507
Aldermen	15
Almshouse	388
Anterior Poliomyelitis	401
Appropriations for 1911	693
Appropriations to pay Maturing Indebtedness, Interest, etc., for 1911	697
Appropriations, Receipts and Balances for 1911	696
Assessors of Taxes	19
Assistant Assessors	19
Assessors' Clerical	719
Assessors' Incidentals	720
Assessors' Plans	236, 720
Assessors' Statistics	763
Assets and Liabilities	749
Athletics, High School	87
Attendance at Schools	41, 42
Auditor, Report of	667
Bacteriologist of Board of Health, Report of	448
Bakeries	428
Bills in Second Reading, Committees on	18
Board of Assessors, Report of	519
Board of Health	21, 719
Report of	397
Orders which have been complied with	457
Bridges	237
Buildings, Committee on	17

	PAGE
Building Permits	380
Burbank Hospital:	
Donations	665
Executive Committee	621
Finance Committee	621
Hospital Staff	622
Maintenance	721
Officers of	623
Operations	654
Radiographs	660
Report of Auditors	640
Report of Medical Staff	649
Medical Cases	649
Surgical Cases	650
Report of Pathologist, Bacteriologist and Electro-Therapeutist	659
Report of Superintendent	641
Report of Treasurer	633
Report of Trustees	619
Staff Organization	622
Summary of Patients Treated	654
Trustees of	22, 621
Visiting Committee of Trustees	629
Cash Receipts for 1911	700
Catch-Basins	570
Causes of Deaths	437
Cemetery Lots Endowment Fund, Ordinance	769
Cemeteries, Perpetual Care of	753
Cerebro-Spinal Meningitis	401
Chief Engineer, Report of	201
Chief Engineer of Sewage Disposal Commission, Report of	573
Chief of Police, Report of	463
City Auditor, Incidentals	720
City Auditor, Report of	667
City Clerk, Incidentals	721
Licenses in Detail	483
Report of	479
City Engineers	228

	PAGE
City Engineer, Report of	227
City Farm Investigation, Committee on	18
City Forester, Report of	333
City Messenger	30
Report of	499
City Officials	18
City Parks	322
City Physician, Report of	391
City Property, Committee on	17
City Solicitor, Report of	493
City Treasurer, Incidentals	721
Report of	159
Civil Service Examiners	21
Claims, Committee on	17
Clarendon Street Ungraded School	63
Class of 1911, High School	78
Coggshall Park	322
Collection of Taxes	176
Commercial and General Course Graduates of High School	77
Committee on Finance, Report of	187
Committee on Reduction of City Debt, Report of	179
Commonwealth of Massachusetts	736
Constables	26
Constables to Serve Civil Process	27
Contagious Diseases	439
Copying Old Records	718
Councilmen	16
Crocker, Charles T., Obituary	630
Dairies	445
Daniels Playground	329
Death Rate	442
Death Report	431
Debt, Statement of	166, 747
Deputy Forest Wardens	361
Diphtheria	404, 448, 730
Diseases Dangerous to the Public Health	400
Disposal Area	607
Dog Constable	27

	PAGE
Dog Licenses	491
Domestic Science Department, Public Schools	95
Drains	569
Dunn, John J., Obituary	478
Education, Committee on	17
Election Officers	31
Election Returns, Committee on	18
Elevator Inspections	382
Employment of Minors	56
Engineering	718
Enrollment, Committee on	18
Estimate of Future Population	578
Evening Schools	41
Events and Changes of last eight years, High School	87
Expenditures for Schools	46
Expenditures for 1911	702
Faculty of the High School	86
Falulah Park	323
Fence Viewers	30
Field Driver	30
Fifth Street Bridge	290, 712
Finance Committee	17
Financial Statement	7
Financial Statement, City Engineer	240
Fire, Causes of	203
Fire Department	722
Fire Department, Committee on	17
Firemen's Relief Association	206
Eire Department, Report of	193
Fire Department, Roster of	195
Fire Department, Salaries of Members	204
Fire Engineers, Board of	21
Fire Losses	203
Fire Record	203
Fire Stations	376
Forestry Department	340
Forest Warden	30
Report of	359
Fuel and Lighting Streets, Committee on	17

	PAGE
Funded General Debt	167
Garfield, J. F. D., Obituary	144
Goodrich street Playground	329
Government and Officers for 1911	15
Grade Crossings	235, 713
Graduates in Colleges or Technical Schools, Standing of	76
Ground Water	587
Growth of Fitchburg from 1875 to 1910	578
Gypsy and Brown-Tail Moth Work, Report of Super- intendent of	347
Gypsy Moth Extermination	722
High School	73
High School, Faculty of	86
High School, Special Class	80
Highways	229
Highways, Committee on	17
Holidays and Recesses, Schools, 1912	138
Hospital Staff	23
House Inspections	421
House Offal	722
Hunters' Licenses	491
Hydrants	214
Ice Cream	428, 456
Inaugural Address of Hon. Frank O. Hardy, January 1, 1912	5
Incidentals	739
Industrial Wastes	587
Inspection of Buildings	206, 380
Inspection of Meats and Provisions	410
Inspection of Wires	210
Inspection of Milk and Plumbing	410
Inspector of Animals	21
Report of	459
Inspector of Meats and Provisions, Report of	427
Inspector of Milk, Report of	444
Inspector of Plumbing, Report of	442
Interception Sewer	591
Interest Account	176, 733

	PAGE
Interest on Water Bonds	735
Inter-Library Loans, an Act to Encourage	156
Inventory, City Stables	297
West Fitchburg Stables	309
Isolation Hospital	407
Janitor of City Hall	30
Joint Special Committees	18
Joint Standing Committees	17
Laurel Street Ungraded Classes	63
Ledger Balances	745
Legislative Affairs, Committee on	17
License Commissioners	20
Report of	527
Licenses, Committee on	18
Licenses and Permits issued by Board of Health	458
Liquor Licenses	726
Loans	744
Lowe Playground	328
Macadam	235
Macadam Construction	708
Macadam Maintenance	707
Main Intercepting Sewer	535, 544
Manual Arts, Report of the Director of	103
Manual Training	119, 129
Manufacturing Wastes	610
Mayor's Inaugural Address, 1912	5
Measles	401
Measurers of Wood and Bark	29
Meats and Provisions, Inspector of	410
Meeting House Pond Land Account	716
Medical Inspection in Schools	66
Medical Inspector of Schools	412
Mental Derangement, Temporary care of persons	411
Middle Street Playground	328
Military Aid	727
Military, Committee on	17
Milk and Plumbing, Inspector of	410
Modeling	125
Monument Park	323

	PAGE
Municipal Register, 1873 to 1912	789
Nature Drawing	112
Offal, Ashes, House Dirt and Rubbish	409
Oiling	287
Old Records	491
Old Taxes	178
Ophthalmia Neonatorum	402
Ordinance, Cemetery Lots Endowment Fund	769
Pensioning of Firemen	771
Relating to Plumbing	781
Relating to Street Traffic	773
Order for Printing City Documents	2
Outside Poor	387
Overseers of the Poor, Board of	20, 385
Report of	383
Page, Henry T., Obituary	631
Parks	334
Park Commissioners	22
Board of	320
Officers	320
Report of	317
Parochial Schools	45
Patrolmen	24, 465
Paving	234
Paving Construction	707
Paving Maintenance	706
Payments, Statement of	163
Penmanship	101
Pensioning of Firemen, Ordinance	771
Perpetual Care of Cemetery Lots	753
Picture Study	117
Playgrounds	327, 337, 737
Plumbing, Ordinance Relating to	781
Police, Committee on	18
Police Department	23, 723
Business of	466
Disposition of Cases	469
Offences	466
Organization	465

	PAGE
Signal System	471
Vehicles	474
Police Stations	472
Pound Keeper	30
Practical Arts School	91
Preliminary Studies Relative to Intercepting Sewer and Deductions therefrom	577
Printing	724
Committee on	17
Promotions and Classification of Pupils	59
Property Owned by the City	765
Public Buildings, Report of Superintendent of	365
Public Burial Grounds	724
Trustees of	21
Report of Trustees of	511
Public Library	726
Administration for 1911	143
Administration for 1912	157
“ An Act to Enlarge the Usefulness of the Free Public Library System ”	156
Committees	157
Gifts	155
Hours	143
Librarian’s Account	154
Librarian’s Report	151
Report	141
Report of Finance Committee	148
Statistics	154
Treasurer’s Statement	149
Trustees of	27
Trustees’ Report	145
Public Parks	725
Public Weighers	28
Punch Brook, Report of Chief Engineer and Consult- ing Engineer relative to diversion of waters	611
Punch Brook Diversion	556
Quarantine Expenses	423
Railroad Park	345
Rainfall	214

	PAGE
Rain Gage	607
Rate of Increase in Population of Massachusetts Cities	579
Receipts and Payments arranged upon the Schedule for Uniform Municipal Accounting	672
Receipts, Statement of	161
Recommendations on Mayor's Inaugural, Committee on	18
Records, Committees to read	18
Registrars of Voters, Board of	21
Repair and Care of Buildings	727
Repairs on Public Buildings	377
Reports :	
Agent of the Board of Aldermen	515
Agent for Soldiers' Relief	507
Auditors of Burbank Hospital	640
Bacteriologist of Board of Health	448
Board of Assessors	519
Board of Health	397
Chief Engineer of Sewage Disposal Commission	573
Chief Engineer and Consulting Engineer relative to diversion of waters of Punch Brook	611
Chief of Police	463
City Auditor	667
City Clerk	479
City Engineer	227
City Forester	333
City Messenger	499
City Physician	391
City Solicitor	493
City Treasurer	159
Chief Engineer	201
Committee on Reduction of City Debt	179
Committee on Finance	187
Director of Manual Arts	103
Director of Practical Arts School	91
Finance Committee of Public Library	148
Fire Department	193
Forest Warden	359
Inspector of Animals	459
Inspector of Meats and Provisions	427

	PAGE
Inspector of Milk	444
Inspector of Plumbing	442
Librarian	151
License Commissioners	527
Medical Staff of Burbank Hospital	649
Overseers of the Poor	383
Park Commissioners	317
Pathologist, Bacteriologist and Electro-Therapeutist of Burbank Hospital	659
Principal of the High School	73
Public Library	141
School Committee	35
School Physician	66, 414
Sealer of Weights and Measures	523
Sewage Disposal Commission, Second Semi-Annual	531
Sewage Disposal Commission, Third Semi-Annual	541
Sinking Fund	181
Street Commissioners	243
Superintendent of Burbank Hospital	641
Superintendent of Fire Alarm Telegraph and Inspector of Wires	209
Superintendent of Gypsy and Brown-Tail Moth Work	347
Superintendent of Parks, Playgrounds and City Forester	333
Superintendent of Public Buildings	365
Superintendent of Sewage Disposal Commission	563
Superintendent of Streets	257
Supervisor of Domestic Science Department, Public Schools	95
Supervisor of Music, Public Schools	99
Supervisor of Penmanship, Public Schools	101
Treasurer of Burbank Hospital	633
Truant Officer	69
Trustees of Burbank Hospital	619
Trustees of Public Burial Grounds	511
Trustees of Public Library	145
Water Commissioners	211

	PAGE
Water Registrar	221
Reserve Police Officers	24, 466
Resources	175
River Improvement	551
Roster of Fire Department	195
Salaries	728
Salaries of City Officers	33
Salaries, Committee on	17
Salem Street Playground	327
Sanitary Stations	408
Scarlet Fever	401
Schedule of Salaries for Teachers, 1912	135
School Accommodations	49
School Board for 1911	37
School Board for 1912	139
School Census	46
School Certificates	56
School Committee, Report of	35
Standing Committees of	39
Visiting Committees of	38
School Districts	54
School for Nurses	645
School Houses and Lots	375
School Incidentals and Books	730
School Legislation	55
Schools of Observation and Practice, State Normal School	137
School Physician, Report of	66, 414
School Registration	43
School Reports	51
School Teachers' Salaries	730
School Year	138
Sealer of Weights and Measures	733
Report of	523
Service Pipes	214, 717
Sewage Disposal	609
Sewage Disposal Commission	20
Additional Legislation	553
Construction Department	544

	PAGE
Department Yard	534, 551, 608
Engineering Department	543
Maintenance Department	544
Organization	533
Second Semi-Annual Report of	531
Third Semi-Annual Report of	541
Sewer Construction	539, 559, 709
Sewer Districts	583
Sewer Districts, Density of Population in	584
Sewered Area, Present and Estimated Future	583
Sewer Maintenance	538, 557, 709
Sewers	566
Sewers Built in 1911	567
Sewer System, Improved	714
Sewing, Manual Arts School	126
Sidewalks	232
Construction	711
Maintenance	710
Sinking Fund Report	181
Slaughter House Report	427
Smallpox	403
Soldiers' Relief	731
South Fitchburg Playground	327
Special Class, High School	80
Special Policemen	24
Standing Committees, Board of Aldermen	18
Common Council	18
School Committee	39
State Aid	727
Statistics	41
Statistics, Fitchburg Water Works	219
Storm Water	585
Street Commissioners	20
Board of	244
Contracts	245
Organization	244
Report of	243
Street Construction	705
Street Lighting	715

	PAGE
Street Maintenance	704
Street Traffic, Ordinance Relating to	773
Street Watering	247, 711
Superintendent of Fire Alarm Telegraph and Inspector of Wires, Report of	209
Superintendent for the Suppression of the Gypsy and Brown-Tail Moth	30
Report of	347
Supervisor of Music, Public Schools	99
Superintendent of Parks and Playgrounds and City Forester, Report of	333
Superintendent of Sewage Disposal Commission, Report of	563
Superintendent of Streets, Report of	257
Support of Poor	731
Surveyors of Lumber	29
Taxes Abated	732
Taxes Assessed for 1911	742
Tax Collector's Fees	732
Taxes, State and County	735
Teachers and Salaries, 1912	131
Teachers in Schools	42
Training School for Nurses, Graduates of	661
Trees	325
Truant Officer, Report of	69
Trust Funds	173, 737
Tuberculosis	406, 456
Typhoid Fever	403, 455
Undertakers	30
Ungraded Schools	63
Upper Common	325
Valuation	8, 178
Valuation and Borrowing Capacity	748
Valuation of School Property	41
Visiting Committees of School Committee	38
Vital Statistics	430
Wachusett Lake Land Account	716
Walton Street Playground	328
Water Analysis	224

	PAGE
Water Commissioners	20
Report of	211
Water, Committee on	17
Water Debt, Funded	215
Water Furnished the City, Value of	216
Water Maintenance	717
Water Rates	717
Water Registrar, Report of	221
Water Supply	585
Weir to Ascertain Leakage	606
Wheeler, Captain Asahel, Obituary	478
Whooping Cough and Chicken Pox	402
Widening Tin Bridge	712

ILLUSTRATIONS

Bracing in 18-foot Trench	Opp.	600
Brick Invert in River Bed	"	600
Burbank Hospital	"	625
Engineering Organization, Sewage Disposal Com- mission	"	574
Excavating with Carson Machine	"	600
Falls at Falulah Park	"	325
Finished Sewer in River Bed	"	600
45-inch Sewer	"	600
Growth of Several Massachusetts Cities	"	580
Growth of Several Massachusetts Cities, Estimating Future Population	"	582
Hardy, Hon. Frank O., Mayor of Fitchburg	"	title
Junction of Brick and Concrete Inverts	"	600
Lowe Playground	"	328
Mirror Lake, Coggshall Park	"	336
Monument Park	"	324
Mt. Elam Entrance to Coggshall Park	"	322
Nurses' Home	"	643
Pavilion and Dance Hall, Coggshall Park	"	322
Plan and Profile, Main Interception Sewer	"	604
Plan of Land taken for filter Bed Location	"	606

	PAGE
Plan of Sewage System	Opp. 572
Plan of Sewered Area	" 610
Plan Showing Proposed Projects for Caring for Storm Waters of Punch Brook	" 618
Playground Groups and Games	" 332
River Crossing	" 600
River Crossing in Cushing Pond	" 600
Scenes at Daniels Playground	" 330
Scene in Proposed Burbank Hospital Park	" 326
Sewer Trench in River Bed	" 600
Trench Excavation with Cable way	" 600
Trench Excavation with Stiff Leg Derrick	" 600
Weir to ascertain Ground Water Leakage	" 600
Wooden Forms	" 600



